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BASIC IDEAS IN RELIGION

OR

APOLOGETIC THEISM

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OR

APOLOGETIC THEISM

BY

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INTERNATIONAL COMMITTEE YOUNG MEN'S CHRISTIAN ASSOCIATIONS

Association Press
NEW YORK: 124 EAST 28th STREET
LONDON: 47 PATERNOSTER ROW, E. C.
1916

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1916

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To

MARY DUNNICA MICOU

WITHOUT WHOSE

AID AND ENCOURAGEMENT

THIS BOOK WOULD NOT HAVE BEEN POSSIBLE

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PREFACE

THE importance of a philosophical study of Apologetics cannot be over-estimated, for doubt, flippant or earnest, is in the very air, and the student should be made familiar with its myriad forms ere they arise in practical experience.

The many references and quotations will explain themselves. The theological professor of today labors under a certain odium. He is popularly supposed to be biased, incapable of fairness, and seldom qualified to discuss the scientific and philosophic problems which arise in modern Apologetics. He must, therefore, fortify every statement and argument by recognized authorities. The literature in the vast field of modern Apologetics is vital and varied, historical, philosophical and scientific. The Christian leader must study thoroughly and with sympathy the grounds and manifestation of every form of doubt in the perplexed believer and the honest sceptic.

The writer trusts his own position will be made plain, that *Christianity is essentially the response of the spirit in faith and self-surrender to the revelation of God in Christ, and not the conclusion of any process of intellectual analysis and reasoning,* though such work of the intellect is indispensable to the religious leader who would sympathize with the sad questionings of honest doubt and meet the assault of philosophical and scientific unbelief.

The scepticism of today is often courteous in tone and serious in spirit, but it is deadly in intent and more widespread than ever before. It strikes at the foundation principles of all faith in God and man. Its victory would mean the death of the spirit of religion itself. Spiritual faith does not spring from nor rest on reasoning, but neither can it thrive apart from reason.

The wide range of modern Apologetics is due to the vital

fact, which A. J. Balfour has clearly expressed, that "the decisive battles of Theology are fought beyond its frontiers. It is not over purely religious controversies that the cause of Religion is lost or won. The judgments we shall form upon its special problems are commonly settled for us by our general mode of looking at the Universe; and this again, in so far as it is determined by arguments at all, is determined by arguments of so wide a scope that they can seldom be claimed as more nearly concerned with Theology than with the philosophy of Science or of Ethics." (*Foundations of Belief*, p. 2.)

Richard W. Micou.

Theological Seminary in Virginia.
December, 1907.

EDITOR'S PREFACE

The Rev. Richard Wilde Micou, D.D., was born in New Orleans, La., June 12, 1848. He was the sixth child of William C. Micou and Anna D. Thompson, the family being of Huguenot extraction, descended from Paul Micou, a lawyer of Nantes, France, who settled in Virginia soon after the revocation of the Edict of Nantes. William C. Micou was a lawyer of eminence in New Orleans, the partner of Judah P. Benjamin. Dr. Micou studied for three years at the state universities of Alabama and Georgia and for one year at the University of Erlangen, Bavaria, where he was a pupil of the great conservative scholars, Herzog, Ebrard, Thomasino and Delitzsch. He spent two years at the University of Edinburgh, Scotland, where in 1868 he took the highest honors in the classics under Professor John Stuart Blackie. Returning to America, he taught Greek for a brief period at the University of the South, Sewanee, Tenn., and then continued his theological studies at the General Theological Seminary, New York. On June 12, 1870, he was ordained to the Diaconate by Bishop Green of Mississippi, at Sewanee, Tenn., and was advanced to the Priesthood by Bishop Wilmer of Louisiana in his first parish, at Franklin, La., on November 15, 1872. In that year he was married to Miss Mary Dunnica of New Orleans. In 1874 he took charge of St. Paul's Church at Kittanning, Pa., and in July, 1877, accepted the call to the rectorship of Trinity Church at Waterbury, Conn., taking charge of the parish seven weeks after its organization. During his residence in Waterbury he was prominently identified with educational work, serving as a member of the Board of Education, with the exception of one year, from 1883 to 1891.

The *Waterbury American* in an editorial at the time of his death said of him: "Dr. Micou was a man first, a citizen

next, and a clergyman last. Of scholarly mind and of wide attainments, he was never academic. In his thinking and conduct he was sincerity itself. . . . Never a sensationalist, never stirring up doubt for the sake of challenging attention, Dr. Micou was always frank and open in the pulpit and out of it, ready to face any problems of our modern life with the serene confidence of assured faith. Beloved as a rector, respected as a citizen, admired as a scholar and thinker, he for a long time held a unique place of influence and regard in Waterbury, and his friends have watched with pride his widening sphere of influence and recognition."

He was known as one of the most studious clergymen in the diocese, and took the lead in discussions at clerical gatherings. The Rt. Rev. Edwin Stevens Lines, D.D., bore testimony to this. "He belonged in a company of clergymen who met together regularly through many years for study. . . . I think we would all say that he was the first among us, the most widely read in history and theology, and an inspiration to us all. The books which he read both in number and in solid character on a great variety of subjects were an astonishment to us all. How he found time to read so much in connection with well performed church duties, we could not understand."

When he was suggested for a professorship in the Philadelphia Divinity School, Rev. Francis T. Russell, D.D., who was later a professor in the General Theological Seminary, wrote of him, "If you can name anything of note that he might be expected to have read for the last twenty years, he has read it. He is an intensely active man intellectually, and squarely abreast of the times, and will keep so." In similar vein Rev. Charles H. Hall, D.D., of Holy Trinity Church, Brooklyn, wrote, "He is, and I emphasize this, the *best read* man of his age in the church, and has at his tongue's end the stores of acquisition in theology and literature which have been gained by years of faithful and unremitting study."

In 1892 he was called to the professorship of Systematic Theology and Apologetics in the Philadelphia Divinity School,

where he remained for six years, going thence to take the similar chair in the Theological Seminary in Virginia, where he taught until his death fourteen years later. The degree of D.D. was conferred on him in 1898 by Kenyon College.

His scholars and friends hoped he could find time to publish the results of his labors. In 1900 the venerable Professor John S. Kedney, D.D., wrote to him, "I know of no one, now in our Church, more likely to carry on a theological advance, so make use of your mid-age before declining days come." But it was not until the fall of 1911 that opportunity was given him to prepare the books he had in contemplation. A temporary breakdown in health led the Board of Trustees to give him an eighteen months' vacation, stating that "in the opinion of this Board it is eminently desirable that the Rev. Dr. Micou should embody in literary form for publication the results of his long and valuable course of teaching in the Virginia Seminary."

He was not spared to do this. In February, 1912, he sailed for England and, after some months of leisurely preparation for the task in the southwestern counties, went to Oxford, expecting to find there a congenial atmosphere for work. June 4th he succumbed to sudden heart failure, and was buried during the Commencement of the Virginia Seminary two weeks later.

At that time the President of the Seminary, Rt. Rev. Robert A. Gibson, D.D., Bishop of Virginia, thus described his work: "Class after class of students have known Dr. Micou as teacher and friend, and have appreciated him at the high value which was his due. A man of rare acquirements, of rapid intuitions, of intellectual courage and of the most profound reverence for the great themes with which he dealt, many of his pupils will carry his name and his words ever in their memories, and will think of him in the depth of their hearts as the person who to them was 'The Master.'"

His former students paid their tribute to him in the following words: "As a scholar his learning was as profound as it was varied and extensive. The wide range of his in-

formation did not seem to limit the thoroughness with which he investigated every problem of philosophy, or obscure his great critical gift in drawing the nice distinctions so necessary in theological definition. It was his task to teach Apologetics at the most difficult period of the century — the period when Christianity had to fight for its life with materialism. All his students during the last twenty years know how well and successfully he defended the spiritual explanation of Life and the Universe. With the wisdom of a true seer he saw the triumph of Idealism of the next generation, while most philosophical teachers were becoming resigned to the fact that materialism was final, and that the conflict must be waged along that line until the end. So while Professor Eucken in Germany is being hailed as a new and inspiring interpreter of the spiritual view of life, the younger alumni of the Virginia Seminary would like to acknowledge gratefully the very similar, though less conspicuous, teaching of their lamented professor.

"An able thinker, a thorough student of science, and a great theologian, he was yet a man of the clearest, simplest and most childlike faith. Every one who knew him realized what a deeply pious man he was, and that his was indeed a life of prayer. His quick and generous impulses, his affectionate interest in his neighbors and pupils, and his genuine sympathy for all in need and trouble, made him a friend who can never be forgotten by us all."

It was with the conviction that a book so earnestly anticipated should not be lost to the Church, that shortly after my father's death three years ago I took up the task of editing the material he left. The fact that he was permitting me to assist him in the work in England encouraged me to attempt it alone. For several years he had been arranging his lecture notes and having them typewritten, so that they are clear in form and arrangement. Approximately twelve hundred such sheets of notes have been worked over in the preparation of this volume. In addition I have had as my guides

in the development of the arguments the *Syllabus* of sixty-four pages issued by him to his students, and the *Manual,* a book of one hundred and sixty-four large pages edited by students from their shorthand class room notes in 1907, and carefully revised by him before it went to press. Lastly, I have my own class room notes recording the lectures as I heard them in 1910–11. I believe that this volume reproduces my father's opinions accurately and the form of his lecturing adequately. The logical method of treatment of the subject makes a certain amount of repetition of matter unavoidable, though the repeated material is always given from a new viewpoint and in a different style. All the references which are given in the footnotes have been looked up and verified. The remaining quotations are, I am sure from my experience with the others, substantially accurate and a true statement of the fact or opinion of the original. A large number are from magazine clippings pasted in my father's notes without a clue as to their origin.

A brief statement of my father's courses will make clear the relation of the subject matter of this book to his teaching as a whole. To the Junior class he gave an introductory course on the Creeds, to the Middle class he lectured on the philosophy of theism or, as he preferred to call it, "fundamental theology," and on Christian Apologetics, and with the Seniors he took up Systematic or Christian Theology. Therefore this volume represents about two-thirds of the work of the middle year. One part only has been omitted, a rather complete review of philosophy, which was generally found necessary unless the class was especially well prepared. On the other hand the subject of evolution, on which from two to three weeks was spent, is given in a complete though necessarily very compact form. The necessity of concise treatment of this subject, and also of the new electro-tonic theory of matter, has led me in those chapters greatly to condense what I found in my sources.

It remains only to express my gratitude to those friends who have helped and encouraged me by their valuable criti-

cisms. A committee of the Faculty of the Virginia Seminary, Doctors W. C. Bell, Berryman Green, and Paca Kennedy, have helped at every stage of the work. The late Dean W. M. Groton, D.D., of the Philadelphia Divinity School was very helpful in his review and criticism of much of the manuscript, as was also Rev. James Bishop Thomas, Ph.D., Professor of Theology in the Theological Department of the University of the South, who has criticized the entire manuscript. I am indebted for valuable criticisms on certain portions of the book to Rev. Dickinson Sergeant Miller, Ph.D., Sc.D., Professor of Christian Apologetics at the General Theological Seminary, to William Allison Kepner, Ph.D., Associate Professor of Biology at the University of Virginia, and to my classmate, Rev. Edwin Anderson Penick, Jr., A.M., of Columbia, S. C.

PAUL MICOU.

Bryn Mawr, Pa.
July, 1915.

CHAPTER I

INTRODUCTION

History and Spirit of Apologetics

Apologetics is the defense of Religion against misrepresentation and denial. It is as old as the preaching of the Gospel, for Christianity, however aggressive, has from the first had to defend itself. As the science of defense it cannot choose its weapons, but must meet the assault wherever and however made. The *apologia* of each generation must have regard to the knowledge and ruling ideas of its own age. It must always be "a reasoning together," never an appeal to mere authority, either of the Bible or of the Church.

A difference between our own and any former period is the vast increase in the number of readers. The newspaper is called "the people's university." It gives prominence to sceptical views when they meet with sufficient opposition to attract attention, and in the "lay sermons" of the Sunday editions it discusses religious topics. The novels and magazines are full of references to religion. The most extravagant religious systems flourish in our midst. Wherever one goes today, even in the smallest and most remote places, he finds sceptical theories advanced. Much of this is mere ignorant repetition of the ideas of a past generation which have filtered down to the common people, but at the same time new lines of attack are developing in higher quarters. The apologist must both know the past, and be well abreast of the present.

The modern preacher's position is very difficult. In an age of specialists, he is the one professional man who cannot be master in his own department simply. Though the biologist, for instance, must know the body, he may be ignorant of the mind and the wonders it has wrought in art and literature.

But it is the peculiar glory of the Christian preacher that he cannot be of narrow culture and limited sympathy. His message is to the whole man and nothing human is foreign to his theme. He alone has to speak continuously to audiences of all ages, all capacities and all interests. Each class and calling judges him by his acquaintance with its speciality, which necessitates the highest and broadest training.

The religious unrest and desire for a defense of the fundamentals is world-wide. Missionaries need the best possible preparation, especially for work in Moslem lands, in India and in Japan. Every agnostic argument propounded in Christian countries is turned with telling effect on the Christian propaganda by keen Moslem or Hindu scholars trained in the best universities of Britain and Europe. In Japan and China there is a great demand for lectures of an apologetic nature, and the translations of good books are eagerly bought. The Christian missionary least of all men can afford to be without thorough training in the fundamentals of theology.

The prospect is anything but dark. The leading writers of the nineteenth century have lifted all thought to a higher and more spiritual level. It is only necessary to contrast Gray's *Elegy* with Tennyson's *In Memoriam,* to see the lack of appreciation of Christianity which existed in the days of Butler, the great apologist of the eighteenth century. Matheson draws the contrast as follows: "It has frequently been asked whether the scepticism of the nineteenth century is more or less virulent than the scepticism of the preceding age. We are disposed to say that in one sense it is less virulent, in another sense, more. The scepticism of the previous century was louder than that of our own. It was more vehement, more ribald, more polemical; it attacked religion for the sake of attack, and with the desire of obtaining the victory. The scepticism of the nineteenth is never ribald, and rarely abusive; its attack is not generally prompted by the desire of victory, but oftener by a sad compulsion. . . . To this extent the scepticism of the nineteenth century is more mellowed than the scepticism of the eighteenth. But from another point of view

it is stronger. Its mode of attack is softer, but its point of attack is more central. The scepticism of the eighteenth century was only an assault upon outworks: the scepticism of the nineteenth has laid siege to the citadel . . . (and) if successful, must destroy the spirit of religion itself. The question is no longer whether a book of the Bible is genuine. It is no longer whether miracles are possible. It is no longer even whether supernatural Christianity can be recognized as true. It is whether there be or be not a supernatural at all. It is whether the conception of God is any longer compatible with that conception of nature at which the scientist has now arrived. . . . The scepticism of our age . . . is concerned mainly with the question whether religion has a right to exist." [1] The very possibility of faith, therefore, depends on our world-view, on a philosophy which shall find place in the cosmos for God as Lord and for man as spirit.

The twentieth century has dawned with much to encourage us. The deadening pall of materialism, which left no room for such a world-view, is being lifted, while on every side is seen an eager craving for a religion which will both satisfy the mind and strengthen the soul of man.

Apologetics has returned to the earlier appeal which the Greek Church Fathers made to the spiritual nature of man, with the underlying conviction of the adaptability of the soul for direct religious knowledge. In this they were following Greek philosophy, which from the earliest times had held that men had in them a latent divine element. Aristotle taught that the mind of man depended on the mind and inspiration of God. Plato believed that there was an eye of the soul open to revelation, but it could be dimmed or lost by purely worldly pursuits. In similar strain the Ante-Nicene Father Theophilus writes to Autolycus: "But if you say, 'Show me thy God,' I would reply, 'Show me yourself, and I will show you my God.' Show, then, that the eyes of your soul are capable of seeing, and the ears of your heart able to hear. . . . For God is seen by those who are enabled to see Him when they have the eyes

[1] *The Psalmist and the Scientist,* pp. 315, 6.

of their soul opened: for all have eyes; but in some they are overspread, and do not see the light of the sun. Yet it does not follow, because the blind do not see, that the light of the sun does not shine; but let the blind blame themselves and their own eyes. So also thou, O man, hast the eyes of thy soul overspread by thy sins and evil deeds. As a burnished mirror, so ought man to have his soul pure. When there is rust on the mirror, it is not possible that a man's face be seen in the mirror; so also when there is sin in a man, such a man cannot behold God." [2] This is Christ's own teaching, "The pure in heart shall see God," and "He that hath ears to hear, let him hear."

Tertullian in his tract *De Testimonio Animae* summons the human soul for apologetic testimony against the pagan writers; "I summon a new witness, one more widely known than any book, more widely discussed than any learning, more widely diffused than any publication, greater than the whole man, being all that makes him man. Stand forth in the midst, O Soul, whether thou be divine and eternal, as most think, and therefore the less likely to deceive . . . whether thou be received from heaven or conceived on earth, wheresoever or howsoever thou makest man to be what he is — a reasonable being, capable in the highest degree of understanding and knowledge — stand forth, and give thy witness. But the soul I summon is not such as hath been formed in the schools, disciplined in libraries, pampered in the groves and porches of Athens, vaunting her wisdom; no! in all thy simplicity, I invoke thee, unlettered, unpolished, unlearned, such as they have who have nought but thee, the soul, the whole soul — from the market pillar, from the highway, from the weaver's shop. 'Tis thy inexperience I need, since none puts faith in thy little experience. I demand of thee such truths as thou bringest with thyself into man, which thou hast learned either from thyself or from the author of thy being." [3]

The direct appeal which the Reformation made to personal

[2] Bk. I, Chap. 2.

[3] Chap. 1.

faith in Christ and the witness of the Spirit in the heart, as against the mediæval implicit faith in church authority and dogmas, naturally threw the emphasis on the internal evidence for Christianity, the Gospel's witness to itself and the affinity of the soul to the message. Thus Luther, under the influence of mystical teachers, wrote: "We might preach the Law forever to a beast and yet it would not enter into his heart. But man, as soon as the law of God is proclaimed to him, at once exclaims, 'Yes, it is so; I cannot deny it.' We could not convince him of this, were it not beforehand written on his heart. But since it is written, however dim and faded the impression may be, it is quickened again by the Word of God, so that the heart must confess that it is true." And Calvin claimed a similar appeal for the Scriptures that the testimony of the Spirit is necessary to confirm the Scripture in order to completely establish its authority. As God alone is sufficient witness to Himself in His own word, so the word will never gain credit in the hearts of men till it is confirmed by the internal witness of the Spirit. This kind of persuasion requires no logic for its justification, but is supported by the highest reason.[4] On this ground alone does the Westminster Confession establish the authority of Scripture. "We may be moved and induced by the testimony of the Church to an high and reverent esteem of the holy Scripture; and the heavenliness of the matter, the efficacy of the doctrine, the majesty of the style, the consent of all the parts, the scope of the whole (which is to give all glory to God), the full discovery it makes of the only way of man's salvation, the many other incomparable excellencies, and the entire perfection thereof, are arguments whereby it doth abundantly evidence itself to be the Word of God; yet, notwithstanding, our full persuasion and assurance of the infallible truth, and divine authority thereof, is from the inward work of the Holy Spirit, bearing witness by and with the Word in our hearts."[5]

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[4] *Institutes*, Bk. I, Chap. 7. Here "highest reason" means common sense or intuition.

[5] Chap. 1: 5.

Though the leading German and English reformers wrote from the standpoint of the nearness of the Divine to the human spirit, they had no interest in Apologetics proper. Roman Catholics and Protestants acted similarly against heretics as the common enemy, and force, not argument, was relied on to answer and crush them. So, unfortunately, the spiritual Apologetic did not continue. With the rapid rise of Protestant Scholasticism, resting on the authority of sectarian confessions and the traditional interpretation of the letter of the Bible, spiritual faith and the recognition of the witness of the reason and the conscience disappeared, except in individual thinkers, like Jeremy Taylor, Chillingworth, and Stillingfleet, or groups like the Cambridge Platonists, Benjamin Whichcote, John Smith, Henry More, and Ralph Cudworth. In England the great and sudden change came with Bacon, whose teaching permeated all English thought with wonderful swiftness. The preceding Elizabethan period had been the flowering of English genius in art, literature, faith and all beauty of thought. Under James, however, it had all withered and faded, as though a killing frost had fallen on the things of the spirit. Hooker was the last of the spiritual theologians of that period. Bacon's influence dominated everything, and the whole tone and temper changed incredibly in half a century. He was soon followed by Hobbes, whose teaching was pure materialism. Locke next denied to man anything but a purely sensational life. His system left no room for spirit, and had no word for personality. Ethics, too, felt the utilitarian blight, and it was taught that good is that which gives pleasure, and evil that which gives pain. Man does the good because it pays. Paley was the chief ethical teacher for thirty years, and he wrote entirely from the standpoint of self-interest.

Under Paley and Pearson, and even Butler, this sensationalism ruled English Christian thought. The tendency was intensified by the rise of the scientific spirit, naturally congenial to the British mind, and Locke's empirical philosophy became accepted by Christian theologians and apologists. They appealed only to Natural Theology and external evidences, and

any form of "mysticism" was discouraged. For Pearson faith did not include any love or trust, it was merely an assent of the mind, a purely intellectual act.

Bishop Butler really belonged to the school of spiritual thinkers, but he frankly says that he dared not write on their lines, lest he prove unintelligible to his readers. In this deistic period Natural Theology was confined for the most part to the design argument and Christian Evidences consisted mainly of an appeal to the letter of the Bible, its authority as a revelation being first proven by the prophecies and miracles it records. Butler's great work, admirably suited to the scepticism of his own age, developed the further argument for revelation, *The Analogy of Religion, natural and revealed, to the Constitution and Course of Nature.* The book had a great effect, and deism declined from that time on. Its usefulness has now passed, for the problem of doubt has completely shifted since Butler's day.

With the Evangelical Revival, the universal element of which was the recognition of the direct action of the Spirit of God on man, and with the corresponding awakening of deeper conceptions of human nature and history in philosophy and literature, came that return to spiritual Christianity which characterized the nineteenth century. It was a protest of the soul against the current materialism. It was, however, only a part of a wider movement of thought and life, as will be seen below.[6] The Lake Poets in England, and Herder, Lessing, Goethe and Schiller in Germany reflect it in literature. Carlyle introduced these Germans to the English in 1829 in his *Signs of the Times.* In Scotland of recent years the movement had its expression in McLeod Campbell. Maurice, Robertson, Kingsley, Dean Stanley and Archbishop Whately belonged to this school, as do now the great majority of the English clergy.

Coleridge was a main factor in introducing this movement, and clearly indicated the way to the new Apologetic. He wrote of his belief concerning the true evidences of Christianity:

[6] See Chap. XVII.

" 1. Its consistency with right Reason, I consider as the outer court of the temple — the common area, within which it stands. 2. The miracles, with and through which that Religion was first revealed and attested, I regard as the steps, the vestibule, and the portal of the temple. 3. The sense, the inward feeling, in the soul of each believer of its exceeding *desirableness* — the experience, that he *needs* something, joined with the strong foretokening, that the redemption and the graces propounded to us in Christ are *what* he needs — this I hold to be the true foundation of the spiritual edifice. With the strong *a priori* probability that flows in from 1 and 3 on the correspondent historical evidence of 2, no man can refuse or neglect to make the experiment without guilt. But, 4, it is the experience derived from a practical conformity to the conditions of the Gospel, . . . it is the actual *trial* of the faith in Christ, with its accompaniments and results, that must form the arched roof, and the faith itself is the completing key-stone." [7]

To every humble hearted man the Bible is its own witness to the truth of its spiritual message. Its commands come so much as good tidings that they at once bear evidence to their origin from above, and the voice in which they are uttered by its unearthly sweetness awakens an echo in the heart which only repeated sins can stifle. As Coleridge said, " It is like one's mother tongue heard by a life-long exile in a distant land." To suppose the contrary — that the Word of God to man cannot authenticate itself to the spirit by its own evidence, but must needs have external proofs — is unworthy and incredible.

The new spirit affected Christian poetry, art, and preaching before it modified Apologetics, and Paley long continued to be the one accepted text-book in Christian evidences. Only within quite recent years have Apologetic works appeared which are at all adequate to their great theme, and can be convincing to an age of new thoughts, wider knowledge, and more genuine sympathy with the spirit of Christianity. The appeal is now made with success to that witness of the heart to the

[7] *Biographia Literaria,* p. 592.

Gospel, the *testimonium animae naturaliter Christianae,* on which St. Paul relied, "commending himself to every man's conscience through manifestation of the Truth." [8]

There are three attitudes, given by Kant, which the modern apologist needs to maintain. The first is the enlightened, the second the enlarged, and the third the logical attitude. More fully stated, as principles, they are:

1. Think for yourself; understand and be sure of your position.

2. Know and have sympathy with the opponent's position, do justice to his point of view.

3. Think consistently in logical harmony. In any apologetic work, it is worth while, at the very start, to fortify oneself with these safeguards to right thinking.

1. Think for yourself; know your own position.

Christ said, "we know what we worship"; [9] yet few Christians could say the same. We inherit rather than acquire faith. This is ceasing to be sufficient even for the mass of people. Earnest men require definite thought and knowledge. The young accept, as they should, the teaching at their mother's knee, but at college they hear all truths questioned. The trend of instruction in science and philosophy is often away from Christianity. The faith which has not a basis in reason is easily troubled. Arguments seem unanswerable because the students have no knowledge wherewith to meet the sceptics, who themselves are utterly ignorant as to what Christian thinkers of to-day believe and hold essential to the Faith. The difficulty is the greater because the young commonly will not seek counsel; they are not willing to take the time and trouble to read the often easy answer to attacks on the Gospel. Thoughtful laymen feel their own weakness and need of guidance. They expect their clergy to be fitted to meet all attacks, and to go down to the strong foundations of the faith, speaking forcibly, with conviction of head as well as heart, so as to be able to strengthen the faith and clear away the real per-

[8] 2 Cor. 4: 2. [9] John 4: 22.

plexities of doubters. It is true that men cannot be made believers by intellectual arguments alone, but to-day many thinking men and women find the way to clear faith blocked by doubts not of their own making. While only fire can kindle fire, yet if the wood be wet we must first dry it.

2. Know and have sympathy with the opponent's position.

This means patience, courtesy, and fellow-feeling. We need the knowledge of the other side for our own sake also. No truth can be reasonably held unless we know and can answer objections. As Ferrier says, "The light of any truth is its contrasting error"; and as Augustine taught, there is no heresy without some truth. Christian ministers should know the assumption that weakens or destroys that truth. The underlying truth itself they should faithfully proclaim and teach in all its relations. Such positive teaching by one who clearly understands the error will undermine the sceptical teaching better than a direct attack. We must study all sceptical systems beforehand that none may take us unawares and seem unanswerable. Sympathetic study will cure us of the old-fashioned, complacent dogmatism, with its supercilious tone which is so irritating. No man can outgrow the Gospel, but an individual congregation can outgrow a narrow or a lazy preacher. Self-satisfied assurance in believer and sceptic is generally in exact proportion to their ignorance. In all public reference to definite systems of doubt or denial the manner in which we make such allusions will reveal our knowledge and fairness, and determine the estimate in which we will be held by the intelligent few in the audience on whose judgment the others depend.

There is more need for sympathy and patience today than ever before, for much of current doubt is reluctant, of the head, not of the heart. Liddon opens his *Elements of Religion* with the remark, "Our age longs to be religious." Many under the influence of the scientific spirit have grown dull of hearing, and lack all spiritual vision, for outer things dominate their whole thinking and the inner world of consciousness is ignored. The sphere of the senses seems the only reality and,

finding no scientific proof of God and the soul and knowing no other evidence, they doubt or despair unwillingly and reluctantly.[10] Many live noble and kindly lives, though narrowed in thought to the world of the senses. Many ethical scholars honor Christ as a teacher come from God — the Holiest of men, the Ethical Ideal — but find it hard to accept Him in the full Christian sense as the Lord, the eternal Son of God, one with the Father. Of all such we must say that they are " not far from the Kingdom of God," and must sympathize with them. When we honestly seek to help perplexed inquirers and understand their difficulties, we discover the weakness at certain points of our own faith. As we weigh their criticisms, scientific and historical, we are led to drop for ourselves, as well as for them, many traditions of men which make void the truth of God's real word.

Coleridge says, " There is no true faith which has not wrestled with doubt." This may be too wide a statement, but it is certain we cannot help doubters if we have had no doubts to fight ourselves. An unruffled, placid faith may be the result of lazy indolence of mind and a selfish, narrow heart, or the result of ignorant conceit. In this world of sin and woe, of mystery and seeming confusion, the more real our faith the greater is our perplexity at the awful mystery of Divine Providence, and the seeming power of evil to harm. Faith in serious hearts often proves itself faith by its very doubt. " Verily Thou art a God that hidest Thyself," cried the Psalmist. The presence of *Job* and of *Ecclesiastes* in the Canon justifies the most searching questioning of the Divine character, and of God's purpose in His dealings with men.

I have spoken of honest doubt as earnest seeking of the light, but it is also true that many loudly expressed doubts and denials are not honest, and that there is no will to believe. They may be a pretext for wilful indifference. Intellectual difficulties may be used to veil dislike of the Gospel itself. Back of them may lurk the feeling that to accept the Gospel truth would bind one to live the Gospel life. Scepticism of

[10] Cf. Romanes, *Thoughts on Religion.*

the head alone may be unwelcome to a man and his will may remain true to his duty, but scepticism of the heart roots in the secret will. Such a man sees no beauty in Christ that he should desire Him, and even if his soul in its depths recognizes in Christ the embodiment of divine goodness, he steels himself against the divine call "Follow thou Me." He knows the promise, "If any man wills to do the will of the Father he shall know the truth," but he is bent on doing his own will only. We cannot argue such a man out of his unbelief. Thought did not produce it and argument cannot change it. Such a moral sceptic must be approached by the Christian preacher of righteousness and judgment in the hope that God's finger will so touch him in pain or grief that divine things will stand out clearly and bring repentance.

3. Think consistently, logically, and with discrimination.

Logical thinking involves classification, and classification implies discrimination between vital and unimportant facts or arguments. It is a serious blunder to put all things on the same level, for then to doubt one is to doubt all. In religion no article of faith can be held in isolation. We cannot separate our science from our theology, keeping them in different compartments. A logical nexus pervades all facts that are real, and each one stands in relation to what goes before and follows after. The student, therefore, should not grow impatient and desire all problems solved at once, but should thoroughly consider each argument in its logical connection and due order. At the same time it is necessary always to think in wholes, so that the ultimate bearings of the facts will become evident as each passes under review.

We must not exaggerate the intellectual element, but neither must we depreciate it. Man is a thinking being, not a creature of feeling alone. Even when we are trying to reach the consciences and the hearts of men, our approach has to be made through their intelligence. Brain stands sentinel at the door of the heart, and an appeal that cannot speak the password is refused admittance. The supreme need is faith and goodwill, but these are not enough if there is no power of thought

as well. We must correlate spiritual truths and facts with the other contents of our knowledge. We must find analogies and points of contact to appeal to every side of the complex being of man if we would win him to the truth.

It is the glory of the Prophets and the Apostles that they appeal to the reason as well as to the heart. St. Peter, though he was not a trained psychologist, distinguished as clearly as we do between feeling, will, and intellect, and wrote, "Giving all diligence, add to your faith virtue, and to virtue knowledge."[11] St. Paul places knowledge above mere emotion; "I thank my God, I speak with tongues more than you all. Yet in the church I had rather speak five words with my understanding, that by my voice I might teach others also, than ten thousand words in an unknown tongue. Brethren, be not children in understanding; . . . but in understanding be men. I will pray with the spirit, and I will pray with the understanding also; I will sing with the spirit, and I will sing with the understanding also."[12]

Theology assumes as its postulates the personality of God and the personality of man, and further holds that God and man are in relation with one another. Postulates are as necessary to theology as to any other science, for they are the basis of all argument. Postulates and intuitions are fully dealt with in a note in the Appendix.[13] Let it suffice here to say that fundamental theology or theism, which is the subject of this book, is the study of these postulates themselves from the philosophic and scientific standpoint, apart from the revelation of God in Christ. The analytical outline (page x) will make clear the relation to one another of the divisions of this subject. The general plan is simple. We will examine first the Idea of God, and the efforts made to deny it, and then the Spiritual Idea of Man, with the denials of it that have been attempted.

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[11] 2 Peter 1: 5.
[12] 1 Cor. 14: 18–20 and 15.
[13] See Note A.

PART I

THE IDEA OF GOD

THE IDEA OF GOD

THE Idea of God is the supreme idea of the Reason. Like all intuitions it is confirmed, first, by its necessity in thought, for it arises in all minds, and its contradictory, consistent Atheism, is incredible; secondly, by its rationality, for it is the implied logical basis of all reasoning and the only ground of certitude in belief; and thirdly, by its universality, for religious faith though varying in degree and expression is a characteristic of humanity.

The basis of our whole Apologetics is the self-revelation of God in the heart of man. St. Paul is very clear on this point. God's everlasting power and divinity, he tells us, are revealed by nature to man "because that which may be known of God is manifest in them, for God manifested it unto them." [1] But he does not say that God's goodness and mercy as attributes are made clear by studying the things of sense; they are perceived only as man's conscience attests God's personality. The revelation of God on the side of character and personality must come through the ethical and personal nature of man. As St. Paul puts it, even those who have not had the direct revelation of "the law," "show the work of the law written in their hearts, their conscience bearing witness therewith, and their thoughts one with another accusing or else excusing them." [2]

But we study this revelation first, not as it is known to us in our own consciousness, but as it appears manifested in the universality of religion and is confirmed by God's works in nature and in man, "the invisible things of God being understood through the things that are made." [3]

God, the Postulate of Theology, is as incapable of absolute demonstration as the Self, but the idea grows clearer under

[1] Rom. 1: 19. [2] Rom. 2: 15. [3] Rom. 1: 20.

devout study. We know God in relation to history, as the object of universal belief; in relation to nature, as its cause and ground; and in relation to man, as Father and Judge. Hence we have three methods of theistic study; Observation, the historic and scientific; Reasoning, the philosophical; and Intuition, the spiritual.

CHAPTER II

THE WITNESS OF HISTORY TO UNIVERSAL RELIGION

The Witness of History, Anthropology, and Comparative Religion to the universal faith in God is not an argument from "general consent," as is often stated. From the fact of universal religion we deduce the certainty of a religious instinct in humanity, and argue that this instinct, like all others, cannot be self-made, but must be awakened by a corresponding environment in which alone it finds its satisfaction. The word "God" in what follows is not used with its full Christian connotation, but broadly in the sense of a superhuman Power or Being so related to man that communion is possible.

There are many definitions of religion, but all have certain points in common. Man is so made that when he comes to full consciousness he feels that there is some One ruling the world. All nations say with the Psalmist: "It is He that hath made us and we are His." [1] Lactantius derived religion from *religare* — to bind, *i.e.,* a bond between God and man. Mere belief in God's existence forms not religion but philosophy. Only when there is communion, some bond of relation, do faith and religion arise. Reville says, "The last word of religious history is, that there exists an affinity, a mysterious relationship, between our spirit and the Spirit of the Universe." [2] James Martineau emphasizes the moral aspect, religion is "belief in an everliving God, that is, of a divine mind and will ruling the Universe and holding moral relations with mankind." [3]

[1] Ps. 100: 3.
[2] *Native Religions of Mexico and Peru,* p. 211.
[3] *A Study of Religion,* p. 1.

Primitive religion underlay all the customs of the family and national life. It included all the ideas we associate with religion, prayer and worship, moral duty, faith in a future life, and divine judgment. It is true that the gods of savages have often savage traits. Men must express their religious ideas in terms of their own experience and moral standards. This is to be expected. The divine image in their souls is blurred by their own grossness. "The light shineth in the darkness and the darkness did not overcome it." [4]

The evidence for the universality of religion is superabundant. Missionaries and anthropologists confirm the conclusion of Waitz that a strict investigation has established as false the assertion that there are peoples among whom there is not a vestige of religion.[5] Tylor has a similar opinion. "So far as I can judge from the immense mass of accessible evidence, we have to admit that the belief in spiritual beings appears among all low races with whom we have attained to thoroughly intimate acquaintance." [6] Tiele calls religious belief "a universal phenomenon of humanity," [7] and Reville writes, "To me religion is a natural property and tendency, and consequently an innate need of the human spirit." [8] Benjamin Constant enunciated the principle constantly verified ever since, that religion is an indefectible and perfectible attribute of our species.[9]

Some travelers do report tribes without religious ideas, but it will be found in such cases that they never sufficiently gained the friendship of the savages to be trusted with their beliefs. As Max Müller points out, expecting to find human brutes, they do find them in the superficiality of their observations or, lacking sympathy with spiritual ideas, they do not have patience to unravel tangled thoughts of childlike minds,

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[4] John 1 : 5.
[5] *Anthropology,* Vol. I, p. 322.
[6] *Primitive Culture,* p. 384; see also de la Saussaye, *Manual of the Science of Religion,* p. 18.
[7] *Outlines of the History of the Ancient Religions,* p. 6.
[8] *The Native Religions of Mexico and Peru,* p. 5.
[9] Cf. Reville, *Prolegomena to History of Religions,* pp. 32, 3.

or again, being slaves to words, if certain terms are wanting in any speech, they argue that the corresponding ideas are also wanting.[10] Sproat's experience in Vancouver Islands shows how slow the natives are to trust a stranger with the most sacred things of their life, and he testifies, "A traveler must have lived for years among savages, really as one of themselves, before his opinion as to their mental and spiritual condition is of any value at all." [11]

Religious beliefs differ widely, as is natural, yet they have certain elements in common. All known peoples have religious faith in the sense that they admit the existence of superhuman powers intervening in the destiny of man; they all possess in the rudimentary state at least the essential elements of worship; faith in the future life, prayer, sacrifice and symbols. These elements are clad with analogous forms among most diverse races and we see everywhere faiths passing through phases nearly identical under general laws.

It may be well to examine briefly some of these elements of worship:

1. There is always a fundamental belief in divine power or powers, a being or beings akin to man and holding relations with him.

2. There is an accompanying belief in the survival of spirit after death. This survival may take many different forms, such as simple existence similar to that on earth, transmigration of souls, re-incarnation, absorption into the world soul, and so forth.

The belief in a future life seems inseparable from the belief in God, and most anthropologists admit this. The *credo* implies an *ego*. Rialhe writes, "The belief in something inherent in our personality, which outlives our present existence or continues it in another world, seems to be universally diffused among mankind, and to be inborn in the human mind." [12] In speaking of the skeletons laid out in the cave of Spey, d'Alviella says, "These contemporaries of the mammoth and the cave-bear, whose energies one would have thought would have been wholly absorbed in the struggle for existence, still found time to attend to their dead, to prepare them for their future life, and to offer them objects which they might have used for themselves, but which they preferred to bestow on the dead for their use in another life." [13]

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[10] *The Origin and Growth of Religion,* pp. 83–93.
[11] *Scenes and Studies of Savage Life,* p. 205.
[12] *Mythologie Comparée,* p. 104.
[13] *Hibbert Lectures,* 1891, p. 16.

3. The use of prayers is also universal. They vary from childlike selfishness, through devout confessions of sin and prayers for pardon, to exalted thanksgiving. They reflect the character of the individual worshiper.

The most primitive type of prayers may be represented by this prayer of the Nootka Indian, "Let me live, not be sick; find the enemy, not fear him. Let me come on him asleep, and kill a great many of him"; or in similiar vein the Osage Indian, "Pity me, O God of War, I am poor, give me what I need, grant me success against my enemies that I may avenge the death of my friends." One of the African tribes has this prayer, "O ye gods, look kindly on this family, let it prosper and increase, let us all be in health." The Yebus ask in a higher tone, "O God in heaven, give us wisdom and happiness"; and the Khonds in humility pray, "We are ignorant what to ask for. You know what is good for us, give us that."

Prayers of praise are found in ancient India, Egypt, Babylon, Peru and Mexico. They are often ritualistic. The Aztecs show a strong theocratic idea in their prayer for the King, "Let him be, O Lord, your own image. Let him not be proud and haughty on your own throne. Do not let him do harm nor act without reason and degrade your throne by iniquity." Yet they offered human sacrifices.

4. The idea of sacrifice seems universal, and takes on various forms according to the symbolism of this most formal type of worship. The following forms seem the most prominent: the gift to God in self-surrender; the peace-offering, where God acts as host; the sin offering; the covenant sacrifice, a tribal rite; and the national sacrifice in making a treaty.

5. Lastly, we find among these essential elements a conception of moral obligation, which is associated with God as the Source of law and duty. When Darwin was in Tierra del Fuego he thought that here was a race without any conception of morality and religion. But he was later convinced of his error by seeing some of the Fuegians, with every evidence of civilization, at a lecture given in London by the missionaries at work among them. The missionaries had found moral ideas current among the Fuegians, which Darwin had thought did not exist. They believed in a great black man always wandering about the woods and mountains, who knew every word and action, who could not be escaped, and who influenced the weather according to men's conduct. This god was at least a god of righteousness, who forbade the slaying of a stranger or even an enemy, and required mercy to the brute creation. Miss Mary H. Kingsley tells us that on both coasts of Africa the terms god-palaver and man-palaver are in use, the latter being a sin against the former. The African tribes and the South Sea Island-

ers give their boys instruction in moral duty at the time of puberty, as did the Romans when the toga was assumed, and the Jews when a boy was received into the synagogue.

John Stuart Mill treats this argument as of little value, merely the old *consensus gentium,* which is an appeal to the authority of mere opinion — which is no authority at all! But Herbert Spencer recognizes the significance of universal religion and admits it demands a deep and universal cause. "Should it be asserted that religious ideas are products of the religious sentiment . . . the problem is not solved; but only removed further back . . . there equally arises the question — whence comes the sentiment?"[14] Romanes also replies, "It is not necessarily true, as J. S. Mill and all other agnostics think, that even if internal intuition be of divine origin, the illumination thus furnished can only be of evidential value to the individual subject thereof. On the contrary, it may be studied objectively, even if not experienced subjectively; and ought to be so studied by a pure agnostic desirous of light from any quarter. Even if he does know it to be a *noumenon,* he can investigate it as a *phenomenon.* And, supposing it to be of divine origin, as its subjects believe, and he has no reason to doubt, he may gain much evidence against its being a mere psychological illusion from identical reports of it in all ages. Thus, if any large section of the race were to see flames issuing from magnets, there would be no doubt as to their objective reality."[15]

A number of writers on religion believe in a primitive monotheism, and many anthropologists testify that the farther back we go the purer is the faith and the fewer the gods. Max Müller answered Renan's theory that monotheism was a general Semitic trait by showing that while all Semites do have the personal or Baal idea of God as opposed to the pantheistic conception, yet they are all polytheists and grossly corrupt in their worship. "This primitive intuition of God, was in itself neither monotheistic nor polytheistic, though it

[14] *First Principles,* § 4. [15] *Thoughts on Religion,* p. 157.

might become either, according to the expression which it took in the languages of men."[16] With the Jews it became monotheistic.

Atheistic Theories of the Origin of Religion

There are four main atheistic theories of the origin of religion, each of which is associated with some great man as its exponent: 1. The Invention of Priests — Voltaire; 2. The product of fear of the powers of Nature — Lucretius and Hume; 3. Fetishism, crude idolatry — Comte; 4. Animism, belief in ghosts and the worship of ancestors — Herbert Spencer.

1. *The Invention of Priests*

This crude view was advocated by Voltaire in France in the 17th century, but has practically disappeared for thinking men, as it is obvious that the word priest stands for a whole group of developed religious ideas. The priest is the product, not the creator of the feelings and worship and customs of which he is minister. He may exploit and modify religion in his own interests, but he does not create it. Herbert Spencer states this clearly: "Moreover, were it otherwise tenable, the hypothesis of artificial origin fails to account for the facts. It does not explain why, under all changes of form, certain elements of religious belief remain constant. It does not show us how it happens that while adverse criticism has from age to age gone on destroying particular theological dogmas, it has not destroyed the fundamental conception underlying these dogmas. It leaves us without any solution of the striking circumstance that when, from the absurdities and corruptions accumulated around them, national creeds have fallen into general discredit, ending in indifferentism or positive denial, there has always by and by arisen a re-assertion of them; if not the same in form, still the same in essence. Thus the universality of religious ideas, their independent

[16] *Chips from a German Workshop*, Vol. I, p. 348.

evolution among different primitive races, and their great vitality, unite in showing that their source must be deep-seated instead of superficial." [17]

2. The Product of Fear

This is tersely expressed by Statius — *Primus in orbe deos fecit timor.* It has been taught by Lucretius, Hobbes, Hume, Strauss, Clodd, and Lubbock. Primitive man, naked and trembling, deified everything that hurt him, fire and earthquake, storm and tempest, and the fiercer wild beasts. Two difficulties are fatal to this theory.

(1) The fact that the early religions, though we admit that fear and dread do form obvious elements in them, recognize benevolent and beneficent deities as well as cruel and malevolent. This appears in the most common name for God — the Sky — as in Aryan races and the Chinese. The heavens through rain and sunshine bless the earth more than they injure it by occasional storm and lightning.

We have also to explain why religion survived the barbarous state of weakness in the presence of nature's evil forces, and grew clearer and stronger with each advance. The earliest forms of sacrifice, not only among the Semites but also in India and Greece, were peace offerings and burnt offerings expressing ideas of devotion and communion with the gods, not fear or shrinking. Robertson Smith and F. B. Jevons have striking paragraphs on this point which it is well to quote.

"From the earliest times, religion, as distinct from magic or sorcery, addresses itself to kindred and friendly beings, who may indeed be angry with their people for a time, but are always placable except to the enemies of their worshipers or to the renegade members of the community. It is not with a vague fear of unknown powers, but with a loving reverence for known gods who are knit to their worshipers by strong bonds of kinship, that religion in the only true sense of the word begins." [18]

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[17] *First Principles,* § 4.

[18] *Religion of the Semites,* p. 54.

"Man, being by nature religious, began by a religious explanation of nature. To assume, as is often done, that man had no religious consciousness to begin with, and that the misfortunes which befell him inspired him with fear, and fear led him to propitiate the malignant beings whom he imagined to be the causes of his suffering, fails to account for the very thing it is intended to explain, namely, the existence of religion. It might account for superstitious dread of malignant beings; it does not account for the grateful worship of benignant beings, nor for the universal satisfaction which man finds in that worship." [19]

(2) The basis of this theory is that power and might impress the childish races more than any other attributes. But this does not account at all for the sense of sin and deserved punishment. There are two kinds of fear; first, cowardly dread, which never has been the basis of religion and, second, the fear of punishment, which kind of fear is "the beginning of wisdom." The fear of a guilty conscience ever draws men back to God, but the terrors of nature never arouse this kind of fear in man.

3. *Fetishism*

Auguste Comte, the French Positivist, held that there were three stages in the development of civilization: the Theological, the Metaphysical, and the Positive or Scientific. The Theological Stage has three phases: Fetish Worship, Polytheism, and Monotheism. The earliest Fetishism was in the savage state when men worshiped in a literal sense natural objects which they considered capable of harming them.

This whole scheme is a specimen of careless generalization. Fetish worship cannot be the origin, for it is only one expression, of the religious sentiment, and is often found in connection with highly developed ideas about God. The history of the word "fetish" suggests the answer to the theory. It is not an African term, as some French scholars supposed,

[19] *Introduction to the History of Religion,* p. 410.

but a corruption of the Portuguese *feitiço* from *factitius*. It meant any help to devotion, such as crucifixes or beads, and the early sailors applied it to the negroes' crude carvings. If the European Romanists had their "fetishes" without actually worshiping them, why should not the simple blacks use them in the same way as symbolic helps in worship? Comte adopted the word as meaning "an object of worship."

Waitz tells us that "several negro races, to whom until now the influence of more highly developed peoples has not reached, are much further advanced in the perfection of their religious conceptions than almost all other nature folk; so far that if we cannot call them monotheists, yet we can assert of them that they stand on the brink of monotheism, even if their religion is mixed with a large amount of coarse superstition." [20] Max Müller suggests that fetish worship may be an expression of reverence. Man may consider God very far off and lower forces and material things as means whereby we come into communication with him. Miss Kingsley in her discussion of Fetishism holds a similar view.[21]

This theory holds that the savage races of today may be taken to represent primeval man. It is a pure assumption, and ignores the fact that the African savage of today is no more primeval than the European. Whatever may be their present state, they have not remained stationary. It is a great mistake to suppose that, because they have no history, they therefore live only in today. On the contrary, they are very slaves to ancestral rites and laws, and when we study their customs we find many which imply a higher religion in earlier ages. The most degraded races have languages far in excess of their needs, both in vocabulary, grammar, and mental ideas implied. Max Müller says: "In several cases the grammar of so-called savage dialects bears evidence of a far higher state of mental culture possessed by these people in former times. . . . No language has yet been found into which it is not possible

[20] *Anthropology*, Vol. II, p. 167.
[21] See *West African Studies*, p. 129. Cf. also, Halleur, *Das Leben der Neger West Africa's*, p. 40.

to translate the Lord's Prayer." [22] Waitz says that the cutting off of colonies from the mother tribe and the effect of barbarous surroundings are sufficient to cause changes in the mental and spiritual life of the immediate descendants of nations well advanced in civilization. He gives many instances of the possibility of rapid degeneration of tribes under evil influences, and some special examples of West African tribes which show degeneration from higher races. This has been clearly proven in the case of the Hottentots and the Tierra del Fuegians who represent the lowest barbarism. The Hottentot speech, described by the Dutch as mere animal grunts and clicks, is now known to have a most regular grammatical structure and a full and varied vocabulary, connected in some way, as yet undetermined, with the languages of North Africa, the Coptic, old Egyptian, and Ethiopic. They have also a great mass of legendary beliefs and folk lore of a very high order. The evidence seems conclusive that for tribes, as well as for individuals, *facilis descensus Averni*.[23]

The best answer to the Fetish theory, as well as to the Animistic theory of the origin of religion, the next theory to be taken up, is that it does not do the very thing it sets out to do, namely, explain the origin of religion. For it tells nothing whatever of how the idea of God arose, on which concept religion is founded. Max Müller's words on this point are very apt: "Let us look this theory in the face. When travelers, ethnologists, and philosophers tell us that savage tribes look upon stones and bones and trees as their gods, what is it that startles us? Not surely the stones, bones, or trees; not the subjects, but that which is predicated of these subjects, viz., God. Stones, bones, and trees are ready at hand everywhere; but what the student of the growth of the human mind wishes to know is, Whence their higher predicates; or, let us say at once, whence their predicate God? Here lies the whole problem. If a little child were to bring us his cat and

[22] *Origin and Growth of Religion*, p. 69.
[23] See Herbert Spencer, *Sociology*, p. 106, who admits the probability of degradation, though it tells against his ghost theory.

say it was a vertebrate animal, the first thing that would strike us would surely be, How did the child ever hear of such a name as a vertebrate animal? If the fetish worshiper brings us a stone and says it is a god, our question is the same, Where did you ever hear of God, and what do you mean by such a name? It is curious to observe how little that difficulty seems to have been felt by writers on ancient religion." [24]

4. *Animism*

Herbert Spencer claims that we may hold it settled that the first traceable idea of a supernatural being is the conception of a ghost.[25] This is questionable. The majority of anthropologists do not accept this view. Ancestor worship is a fact most common, but this explanation of its origin and also of religion itself will not stand examination. The theory is simple — too simple. If the idea of gods comes from dreams of ghosts, whence comes the concept of the ghost? Not from the savage's own conviction of personality as somehow different from his body which he controls as he wills, and therefore thinks — as all races do — that the spirit will survive the body's death; for Spencer does not recognize the spirit's witness to itself. He holds that the true savage derives his idea of self or personality from these ghost visions, and not *vice versa.* Everything is real to the savage mind, so the theory goes, even his day fancies and night dreams. He thinks he actually goes in the night to the scenes of his dreams and acts what his vision pictures. He interprets these dreams of the dead in the light of other experiences, such as his shadow in the sun, echoes from the hills, and his image in the lake. This "double" he sees in the water, he identifies with his double as seen in dreams. The doubles of other people also appear in his dreams. If the persons seen are dead, then the idea of the ghost is formed.

Most psychologists today recognize the idea of the self as a spiritual element in the human consciousness without which

[24] *Origin and Growth of Religion,* p. 117.
[25] See *Ecclesiastical Institutions,* Chap. I.

no such experience is possible, for it unifies our multifarious sense perceptions. To say that man gets the idea of self from mere shadows or echoes is to invert the whole order of mental growth. It is because man intuitively recognizes his inner self as his thinking principle, distinct in kind from his body and outer things, that he is able to believe in ghosts at all or in the dream forms, as the spirits of his absent or dead friends. He interprets life and nature in terms of his own consciousness of personality, instead of interpreting himself in terms of nature, and so discovering himself.

Animism treats primitive man as having less reasoning power than a four-year-old child. He had no consciousness of himself as a willing and acting agent, or of the principle of causality, or of contrast between animate and inanimate things, or of the difference between his dreams and his daylight experiences. But though thus idiotic, he is held to be able by a complicated process of reasoning to evolve these spiritual concepts from purely outer sensations, like shadows and echoes, and to construct the whole body of intuitions, including God, out of them. The starting point of Spencer's whole theory is highly improbable. He fails at the outset to give us any evidence of the commonness of dreams about the dead. They certainly are not frequent in our experience, and there is no reason to suppose that the savages have them any more frequently than we. Most dreams fade at our awakening and are not remembered. Why should the dreams of savages be any more vivid than ours? Besides, we today do not dream of our ancestors whom we have never seen, and the savage would not be more highly developed in this than we are. The spirit of one recently dead is supposed by the savage to linger about the house or grave. But not so the spirits of those long dead.

Moreover, Spencer never gets back to the prehistoric period when they worshiped only ghosts. Ancestor worship does go back to the earliest times, but then as now it is found in connection with the worship of true gods, not merely demigods. His historical arrangement shatters on the single fact

that in all the cases he cites the savages already have faith in God and spirit side by side with the forms of ancestor worship. This was true of the household gods, the Lares and Penates, of Rome and Greece. In Homer and all Greek literature we read of honors paid to the dead in funeral rites and sacrifices, and of dreams of dead heroes — of which Achilles' dream of Patroclus is a striking example — but they also believed in and worshiped higher gods, not their tribal ancestors. In China today worship still centers around the family altar with its images and symbols of the dead ancestors, but there is also the public state worship of "Heaven" by and through the ruler, and this is older than Confucius. If we do thus find higher beliefs coincident with honors paid to the dead, why may it not always have been so? How can we prove that the higher form is always the product of the lower? There is no trace of ancestor worship in the Vedas, nor in ancient Egypt, nor clearly among the Hebrews or Semites, though some scholars affirm it. Spencer admits we have at present no examples of any such development, and we cannot possibly know the ideas of the primitive man who did these wonderful things. But perhaps his doctrine of evolution will help us where experience fails! By the use of the evolutionary imagination, we can delineate the leading lines of primeval thought. Having thus inferred *a priori* the character of such thoughts, we can realize them as far as possible in our own thought and thus discern them as actually existing in the past. Where? we ask. This starting point granted him, his theory proceeds by regular steps. Rudimentary religion is the propitiation of dead ancestors, who are supposed to be still living and capable of working good and ill to their descendants. The next step is singling out the tribal ancestor as of special honor. His human personality being lost sight of, he is considered all-wise and all-powerful and finally is looked upon as god. Thus we have three stages of progress: The family god; the tribal or demi-gods; and at last one god exalted above all others. But we must account for the impulse which would lead a whole tribe to elevate such incidents as dreams into gods. The par-

ticular dream would have to be experienced by most of them. To derive the profound idea of God from the simple fact of occasional dreams in which dead persons appear, is to stop at the surface of things, for in order to effect this wondrous transformation of a dream figure into a god we must ask, first of all, what mysterious force or impulse, common to so many minds, caused them to draw such an inference from so small and unfounded a premise. Spencer overlooked the obvious fact that the transition from the dream of a dead man as still living to the thought of a divine Being demands the previous concept of God. The latent idea must have been in some way already ingrained in human nature, so that it only needed, as Plato would say, an awakening from its hibernation; else why should human dreams produce a religion, and bestial dreams none?

The transformation from dream to god is the more easy, according to Spencer, if the ancestor had a name like the sky or the sun, the latter being due to his coming from the East. In time this would lead to his being worshiped as the sun-god. This theory plainly inverts the psychological order. Nothing is more conspicuous in early races than their tendency to poetic personification of nature and her forces — a mode of thought Spencer was too prosaic to understand. They did not interpret themselves in terms of outside experience, but rather they brought nature into kinship with themselves by attributing to her forces such will and power as they had. They would not have thought the dream-figures ghosts of dead men if they had not had the certainty of their own spirit as something different from the body and surviving it.

Theistic Theories of the Origin of Religion

1. *The Traditional View*

God made Himself known by some external manifestation, and this revelation to the senses was handed down by tradition to succeeding generations. The theory holds that we must get our knowledge of God, as we do all other knowl-

edge of things external to us, by the medium of our senses. But we cannot feel God, nor smell, nor taste Him. Therefore He must have revealed Himself at first to man through his eyes and his ears. Man must have seen Him and heard Him speak. This blunt statement of the theory is its own sufficient refutation. It treats primitive man as no better than a brute lacking all spiritual faculty. A psychological miracle would needs first be wrought to enable primitive man to understand what the miraculous voice or vision meant, and it would have to be repeated in his descendants, else they would not understand the "tradition" verbally handed down. But grant him a precedent spiritual understanding, which visions awaken and develop, and you pass out of the traditional theistic view into the intuitive view.

The earlier anthropomorphic conception of God in the Bible is condemned by the prophets. The angels are messengers from God, not beings who come to declare there is a God. The word of God comes to the prophet as a still small voice speaking to his heart, not to his ears. God is taken for granted from the first word. "In the beginning God created the heavens and the earth."

2. The Intuitive View

Man as spirit is directly, though dimly, conscious of God within him and without him.[26] This spiritual consciousness is deepened and confirmed by experience and revelation.

God as Spirit must reveal Himself; Man as spirit is capable of receiving such an inner revelation which God Himself makes manifest within men.[27] If we trace all forms of religion back, they root in an ineradicable conviction of the soul that it stands in vital relation to God. This faith must have arisen with clear self-consciousness and the vision of the world. But sin has darkened our spiritual vision and "alienated us from the life of God."[28] Were it not for sin we would know Him immediately and with the same certainty with which we know

[26] Cf. Rom. 1: 19, 20. [27] *Ibid.* [28] Eph. 4: 18.

ourselves. But though blurred the image is still there. It underlies the personality and gives rise to the spiritual faith and conviction which divide men from brutes. Christ sharply discriminates between man and beast. No matter how low the Prodigal Son sank, he never considered himself to be on the same plane with the swine before him. It was not from their level that he rose when he "came to himself."

This view does not mean that man was born with an "innate idea" of God, for no one is born with any ideas at all, but that whenever man appeared he possessed an innate aptitude or capacity to know God, which awoke under due stimulus. This potentiality of faith, which the older writers called *theologia concreata,* corresponds to the outer revelation in nature. But man has also an inner environment. There are two factors in the growth of religion: the subjective spirit of man and the objective factor, the living God acting upon him and touching his spirit. As God reveals Himself more and more, He educates the soul to receive Him. But the development was slow, the work of centuries, often thwarted or perverted, as we see from Old Testament history.

The crudity and cruelty of the superstitions in which these profound faiths often found primitive expression, do not detract from the wonder that men should have thought such thoughts at all, reaching down into the depths of their own being, rising to the heights of the infinite heavens. The race, like the individual, has its childhood and childish estimates. Only slowly do the child and the race grow in power of spiritual apprehension and begin to form judgments of worth. We boldly affirm that men in the childhood of the race personified the powers of nature just because in some dim fashion they felt that back of nature there reigned a Personality of some transcendent sort. The religious self-consciousness is a reciprocal fellowship, a communion with God, which is possible only with a Person, for only if God is an "I" can He be to men a "Thou", as He always is to His worshipers at this grade of religious development.

But is not this an admission that men made God in their own

image? And if so what value can such gods have for us, the wise men, who discern their unreality in the light of their origin? But is the matter indeed so simple? If, and the supposition is not baseless in the light of all the facts, if there be a living God, who did make man in His own image, theomorphic in his spirit, and if we live and move and have our being in this Source and Spring of all existence, would not men be conscious of a primal impulse, vague but real, to feel after Him, as the life-giving winds and the snowy white-caps of the boundless ocean call to the salmon in the far off rivers of the uplands? Why should he not dream and see visions, which are dim symbols of divine realities, shadowy images in the mirror of his heart of the things unseen which are eternal?

It is this instinctive *sensus numinis* which makes man what the anthropologists call a "religious animal." Accepting the definition, we argue that if the religious instincts point to no reality as their source and object, they differ from all other instincts which never deceive and are never purposeless. Thus our social and ethical impulses or instincts have their proper environment in human society and the moral order. Even so does this intuitive faith in a divine Power, Source and Lord and Friend of man, transcending him, yet akin to him, point to a spiritual environment of the human spirit, God, in whom we live.

This argument from instinct, a deeply seated need of the soul, to a corresponding spiritual environment has been recently urged by several men of science, such as Romanes, Pratt, the psychologist, and especially John Fiske, whose eloquent and convincing presentation of this thought we quote. But he is mistaken in supposing that it is new. Homer in the *Odyssey* had it in mind when he described men as gaping after the gods as the little nestlings do for the mother and their food.[29]

"We see the nascent Human Soul vaguely reaching forth

[29] The author had been using this argument in his lecture-room for some years prior to its statement by Fiske.

toward something akin to itself not in the realm of fleeting phenomena but in the Eternal Presence beyond. An internal adjustment of ideas was achieved in correspondence with an Unseen World. That the ideas were very crude and childlike, that they were put together with all manner of grotesqueness, is what might be expected. The cardinal fact is that the crude, childlike mind was groping to put itself into relation with an ethical world not visible to the senses. . . . Now if the relation thus established in the morning twilight of Man's existence between the Human Soul and a world invisible and immaterial is a relation of which only the subjective term is real and the objective term is non-existent, then, I say, it is something utterly without precedent in the whole history of creation. All the analogies of Evolution, so far as we have yet been able to decipher it, are overwhelming against such a supposition. To suppose that during countless ages, from the seaweed up to Man, the progress of life was achieved through adjustments to eternal realities, but that then the method was all at once changed and throughout a vast province of evolution the end was secured through adjustments to external nonrealities, is to do sheer violence to logic and common sense. . . . So far as our knowledge of Nature goes, the whole momentum of it carries us onward to the conclusion that the Unseen World, as the objective term in a relation of fundamental importance that has coexisted with the whole career of Mankind, has a real existence; and it is but following out the analogy to regard that Unseen World as the theater where the ethical process is destined to reach its full consummation. The lesson of evolution is that through all these weary ages the Human Soul has not been cherishing in Religion a delusive phantom, but in spite of seemingly endless groping and stumbling it has been rising to the recognition of its essential kinship with the ever living God. Of all the implications of the doctrine of evolution with regard to Man, I believe the very deepest and strongest to be that which asserts the Everlasting Reality of Religion." [30]

[30] *Through Nature to God,* pp. 189–191.

The historical witness to the universal faith in God is one of the strongest as well as simplest arguments which we have. It underlies the intellectual "proofs" which are next to be discussed, for it furnishes the material for reason to work on, as the world furnishes material for science. The intellectual proofs are rather confirmations of a preexisting idea of God than demonstrations from which we can conclude logically that there is a God. Our belief in the Author of all that exists, the Source and the Father of our own spirits, had its deepest and ever-living root in the universal thought which was not satisfied by the mere play of appearances in Nature, but yearned to know what lay behind them, just as it knew that back of all visible human action is the invisible spirit of man. This struggle after something higher than we see and know through the senses, this demand for a real agent for every act, and a mover for every movement, forms the primitive and indestructible witness of humanity to its faith in God. The historic fact of religion is the best proof of religion, just as the growth of the oak tree is the best proof of the tree. It is there not by our own will, but of itself, *i.e.,* by a higher will which gave life to the acorn. There may be dead leaves or broken branches on the tree; there may be corruptions and outgrown forms of worship, but religion itself remains a fact. You can as little sweep away the oak tree with its millions of seeds from the face of the earth as you can eradicate religion from the human heart. The history of religion teaches us the truth of the one everlasting conviction that God *is,* the most certain and the most real of all truths.

CHAPTER III

THE WITNESS OF THE INTELLECT: THE COSMOLOGICAL ARGUMENT

THE WITNESS OF THE INTELLECT

The method of theistic study to be taken up in this and the next four chapters is that of the reason or intellect. It moves along philosophical lines, and analyses and verifies the belief in God by the necessary laws of thought. The Witness of the Intellect falls logically into three divisions, the Cosmological, the Teleological, and the Anthropological Arguments.

These so-called theistic proofs are not demonstrations of God's existence, but rational confirmations of our intuitive faith. They serve to give clearness to the idea of God in relation to nature and to meet the objections of the materialist and agnostic. Their effect is cumulative; each adds to the conclusions of the preceding. They are separable in thought, but merge into one another in common usage. Cause implies order, and order implies mind, thus suggesting as First Cause a conscious Being who is personal and has character. So the average thinker passes over at once into the Ontological Argument, or the argument from intuition as to the pure being of God. The conclusion is always something greater than the premises logically warrant us in making. Life is larger than logic. A living experience will continue to press on to its conclusions, even though probability may have to come in to bridge the gaps left in the constructive work of the reasoning activity.

We may liken these proofs to working hypotheses in science, for we can verify them in the same way by experiment. But

as matters of faith belong to the world of spirit, we must experiment in the same sphere of ethical and spiritual life. Do good, follow the light of Christ, live according to the hypothesis of God, and proof, *i.e.*, conviction, will follow. Scientific hypotheses are tested by their agreement with the accepted principles and facts of science. Even so, we can verify our faith in God by its accord with all rational thought and with the demands of ethical and social life.

The depreciation of the intellectual proofs by many theists, as for instance the Ritschlians, who throw the whole emphasis on intuitive faith, is most unwise, for Nature herself, awakening the reason of man, suggests to all minds thoughts about the power and mind and rule of God. It is true that Nature, studied in the light of intellect alone, does not reveal the personality or moral character of God, and therefore "natural theology" needs to be supplemented by the moral and ontological arguments. But the arguments from nature appeal through their simplicity to the vast majority of men, ancient and modern, learned and unlearned, alike. All lines of logical thinking lead to God, the Creator of the world.

As Cousin has said, "There are different proofs of the existence of God. The consoling result of my studies is, that these different proofs are more or less strict in form, but they all have a depth of truth which needs only to be disengaged and put in a clear light, in order to give incontestable authority. Everything leads to God. There is no bad way of arriving at Him, but we go to Him by different paths." [1]

These arguments underlie all religious faith, and as they are the "proofs" most intelligible to ordinary men, though denied or minimized by sceptics, we must study them faithfully in order to help both classes. The Christian Apologist should use such as appeal most strongly to the individual doubter or the class he has in mind, not following his own pre-possessions, still less relying solely on any form of philosophy foreign to common thought.

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[1] See Flint, *Theism*, p. 350.

THE COSMOLOGICAL ARGUMENT

The Cosmological Argument, the simplest of the theistic proofs, is based on the intuition of causality. Whatever happens or changes must have a cause for its happening or changing. Its proper name therefore is the Ætiological or Cause Argument. It is also called the Argument from Contingency.[2]

The truth of the law of causation, which is axiomatic in science, does not need any demonstration here. Huxley tells us that the one act of faith in the convert of science is the confession of the universality of order and the absolute validity of the law of causation under all circumstances. "If there is anything in the world which I do firmly believe in, it is the validity of the law of causation."[3]

The universe is a vast congeries of phenomena mutually related. Each series of events and the sum total of the whole must have a sufficient cause back of them. This cause, being antecedent to all existing things and their changes, must be the first and necessary cause. It is "necessary," for the mind demands a cause which is itself a true beginning.

The argument from contingency is very simple. We know that we exist and yet we have an innate feeling that we did not create ourselves. Again the world in which we live could not create itself. It is not necessary, that is, self-existent, but it is contingent on some power external to itself. Therefore we are led to the belief in a God who created both us and the world. John Locke argues the existence of God along these lines. "Man knows by an intuitive certainty, that bare nothing can no more produce any real being, than it can be equal to two right angles. . . . If, therefore, we know there is some real being (*i.e.,* man), and that nonentity cannot produce any real

[2] This argument does not refer to pure or changeless existence which could not be an object at all. If nothing happened and there were no events or phenomena, we would not have the idea of cause. The Western mind can hardly grasp the conception of the Buddhist Nirvana where there is existence but no motion, and rightly considers such a state as practically equal to total extinction.

[3] *Essays, Science and Morals,* p. 121.

being, it is an evident demonstration, that from eternity there has been something; since what was not from eternity had a beginning; and what had a beginning must be produced by something else." Then he proceeds to show that this eternal something which produced man is "most powerful, and most knowing, and therefore God."[4] Leibnitz uses a similar argument, and Thomas Aquinas gives it in syllogistic form.

Aristotle gives the argument clearly and concisely. There cannot be an infinite series of physical causes, each moved by others. There must be at the last a Final Cause, itself uncaused, an eternal and necessary Being "upon which hang heaven and nature." The Being who causes all things must be eternal (ἀΐδος) and pure essence (οὐσία) and thought (νόησις) and active energy (ἐνέργεια). The essential Being acts on the ground of its goodness and love of the beautiful.[5] Aristotle distinguished four kinds of causes: the Material Cause, the necessary condition of the action; the Formal Cause, the form or idea of the action before it takes place; the Final Cause, the end or purpose of the action; and the Efficient Cause, the force which directly causes the action to take place. These four causes are most frequently seen all together in the same operation. Thus all things are made from some material, according to some plan or form in the mind, by means of some force, and for some purpose or end which embodies this "idea." This is shown in the usual questions which a child asks concerning a new toy. "What is it made of?" "Who made it?" "How (by what power) is it made?" "What is it made for?"[6]

Denials of the Cosmological Argument

1. *Hume's Denial of Causality*

The principle of causality on which the cosmological argument depends has not escaped attack. "Hume's sagacity was true to the scent here, and led him straight, as it were, to the

[4] *Human Understanding,* Bk. IV, Chap. X, §§ 2–6.
[5] *Metaphysics,* Bk. XI, Chap. 7, § 2.
[6] For a fuller treatment of Aristotle's four causes see Note B.

linchpin of existence. Were a man minded to establish either scepticism or nominalism, how could he, more directly or definitely, accomplish his purpose than by loosening the knot that bound an effect to its cause? Mathematics apart, it was the ground, Hume saw, of our theory and practice everywhere. Above all it was specially the ground of *belief*. At all times that we pass from present impression to some different idea *with belief,* it is the principle of causality mediates the connection and supports the inference: evidently, then if, in the interest of either scepticism or nominalism, we would shake belief, it is with that principle we must begin the attack." [7]

Hume represents the mind as passive, and all knowledge as coming through the senses. Sense impressions give us all our ideas, which differ only in force or vividness. But is there any sense impression of cause? Events are entirely loose and separate, we cannot observe any tie between them. Every effect is a distinct event from its cause and cannot be discovered in its cause. All we can perceive is that one thing happened before the other. But we see certain events regularly conjoined in experience, for instance, fire and heat, or a falling stone breaking a jar. This relation of antecedent and consequent, or order of succession, being invariable, arouses the idea of one event causing the other. The idea of causality is due to the influence of "fixed custom," not to any reality of existence. Our senses give us no proof whatever of what we call force, energy, or will, which therefore are words without meaning for the scientific thinker. Our experience is too limited for us to predict that events will invariably follow certain others.

Carried into the wider field of a First Cause, the negative force of Hume's theory is at once apparent. Aside from the fact that all causality is questioned, we cannot have any idea of a First Cause without being able to have an impression of it. As there has never been any experience of Deity through sense impression, we cannot be sure that there is such a Being.

[7] J. H. Stirling, Essay in *Princeton Review, The Philosophy of Causality.*

Hume works along the line of rigid determinism, and admits of no active agency in the will of either Deity or man.

It is a curious fallacy. He says that the causation idea may be resolved into repetition of experience, contingency, and succession of time. But every man knows that the idea of force or power is absolutely distinct from either contingency or succession of time. The idea could never arise at all from either of these. The essential element in the causality impulse is not mere sequence but power, a causal not a casual relation.

There are certain inconsistencies in Hume's scheme which are discussed in a note, but in addition two things may be urged against his general position.[8]

(1) Cause and effect are not really successive in time, but are simultaneous. The assumption that cause and effect are only time sequence meets with no support in the scientific statement of the occurrence of phenomena. In every change cause and effect are not distinct in time but simultaneous, though the imperfection of our senses or instruments may cause a delay in our perception of the change; as in the case of the eclipse of Jupiter's moons, which led to the discovery of the velocity of light. The smoke and the noise of the whistle are simultaneous, though we hear the latter after we see the former.

(2) Invariability of sequence implies some causal force. This is also manifested in the effect being always proportioned to variation in the cause. Mill's law of concomitant variation clearly proves causal connection, though Mill will not allow so obvious a deduction. For instance water may be changed into steam, or iron into liquid, simply by the application of heat. The connection here is surely causal.

Mill considers the material cause to be the efficient cause. He says that nature consists of groups of connected phenomena; nothing ever happens alone and all the antecedents are equally important. The popular mind gives the name of cause to the last condition which brings about the effect, but it has really no more power than the other causes. The popular mind is right. The last condition does bring about the re-

[8] See Note C.

sult, because it is always some form of energy, the efficient cause of all changes. A match ignites by heat caused by friction. Oxygen and hydrogen gases do not unite to form water until a current of electricity passes through them. He admits that our natural impulse is to believe that there must be some peculiar tie or mysterious constraint exercised by the antecedent over the consequent. Sigwart criticises this quiet changing of the word "cause" from the concept of force to that of the sum total of all the conditions which precede a given effect. This change of terminology presupposes a different kind of cause from that which implies force. The proper meaning of force or cause is not the ground of the change, but something which makes it actively possible and whose absence would prevent the action.[9] Thus some peopl have been blinded by a flash on an electric car. The blindness was due to the diseased condition of the eye plus the dynamic cause, the flash. People with normal eyes on the car were not hurt. The blindness could not have resulted without the underlying condition of the eye, any more than if the flash had never occurred. In chemical experiments we distinguish carefully between the necessary conditions of action and the force which causes the chemical changes to take place.

Alexander Bain follows Mill, as do also some more recent logicians who use purely scientific terms. One of the modern text books on logic has in it: "The popular mind still tends to regard the cause as an *agent* which *produces* the effect, through some power or efficiency which it possesses. . . . For Science, the cause is not an agent, but the invariable antecedent of something else which simply follows it."[10] Bain, like Hume and Comte, seeks to get rid of the very idea of force. The cause of the falling down of a fort in a battle is simply the moving cannon balls; it is a pleonasm to interpolate a hypothetical something called "force." But the cannon ball does nothing unless set in motion by the expulsive power of the powder, and its own striking force is determined exactly by

[9] *Logic*, Vol. II, p. 108.
[10] Creighton, *Introductory Logic*, pp. 311, 2.

its momentum, the basis of the science of gunnery. Modern science makes for the old and common idea of cause and force, for its essence is dynamic, and it defines all phenomena as simply changes in modes of motion, molar, molecular, or atomic. Yet many scientists still affect the style of Hume, and talk only of antecedent and consequent, ignoring the force altogether.

Such men as Jevons, Erdmann, Wundt, William James, and Sigwart defend causality and force. The latter tells us that we can study cause best in the simplest cases which are intelligible to every one. Then we will observe three points: first, that that which takes effect is originally always a concrete thing with properties which give it a particular existence; second, efficient action is action which occurs at a definite time, is instantaneous or persists for a space of time, and is directed towards some other thing; and third, that which is effected is a definite change in this second thing, and the action finds its fulfilment in just this production of change, *i.e.*, in the realization of the effect. Thus mere sequence cannot explain causality, as Hume thought, for mere sequence never did suggest to any one what we all mean by cause, the communication, change or annihilation of motion. The only explanation open to us is that of a definite relation in the permanent qualities of both substances. These relations contain the conditions under which constant forces can become active, and certain definite changes follow which are determined by the inmost character of the substances involved.[11]

2. *The Positivist Position*

Matter and force are eternal and correlative phenomena. The world is a continuous process of change without beginning or end.

This is not a solution but an evasion of the problem by fixing attention solely on the phenomena, and ignoring causation, a thing impossible in practice. It treats the world process as its own cause; but a "law of nature" is not a cause in any

[11] See Sigwart, *Logic*, § 73. See also Note D.

sense, it is simply a generalized statement of what always happens under certain conditions.

Auguste Comte clearly states this theory, and says that we must stop inquiring into the causes and reasons of things, and be content to observe and record what we see. We must not reason beyond phenomena. In the same spirit as Comte, Alexander Bain writes that "the path of science as exhibited in modern ages is toward generality, wider and wider, until we reach the highest, the widest laws of every department of things; there explanation is finished, mystery ends, perfect vision is gained." [12] The uniformity of nature is the last word of science, and is the sufficient explanation of the world as self-existent and self-developing. We cannot understand it, but we must accept it. There are many other scientists who assure us that they can accept such an infinite regress of instrumental causes. We must take them at their word, but such a view is incredible to the average man. *His daily experience with causality and will power make it impossible for him to conceive of an infinite series of mere phenomena which had no beginning.*

Spencer treats the uniformity of nature as a simple process of development. Out of homogeneous matter and homogeneous force at the beginning of things, there comes by simple development the heterogeneous forces and heterogeneous phenomena which we know and science studies. This theory may be summed up in the statement that the world process is the world cause; which sounds as nonsensical as it really is, if we express it, things happen as they do because they are what they are. The description of the process is taken as the explanation of the process. Positivism is a consistent attempt to check thought — or at least to keep it purely within the limits of description of phenomena conceived as happening successively but not causally connected.

The fallacy is obvious. The laws of nature are treated as somehow the cause of the phenomena which they simply formulate. It is common even in formal treatises to say that the

[12] See James, *Will to Believe and other Essays*, p. 71.

laws of nature do this or that, but in fact they do nothing; not the laws of nature but her forces are the efficient causes of changes.

In his searching critique of the scientific method Karl Pearson has the following about law. "What are we to say, then, with regard to scientific law — does it really exist before man has given expression to it? Has the word any meaning when unassociated with the mind of man? I hold that we must definitely answer 'no.' . . . A scientific law is related to the perceptions and conceptions formed by the perceptive and reasoning faculties in man; it is meaningless except in association with these; it is the *résumé* or *brief expression* of the relationships and sequences of certain groups of these perceptions and conceptions, and exists only when formulated by man. . . . We are thus to understand by a law in science, *i.e.*, by a 'law of nature,' a résumé in mental shorthand, which replaces for us a lengthy description of the sequences among our sense impressions. Law in the scientific sense is thus essentially a product of the human mind and has no meaning apart from man. It owes its existence to the creative power of his intellect. There is more meaning in the statement that man gives laws to Nature than in its converse that Nature gives laws to man. . . . Men study a range of facts — in the case of nature the material contents of their perceptive faculty — they classify and analyze, they discover relationships and sequences, and then they describe in the simplest possible terms the widest possible range of phenomena. How idle is it, then, to speak of the law of gravitation, or indeed of any scientific law, as *ruling* nature. Such laws simply *describe,* they never *explain* the routine of our perceptions, the sense-impressions we project into an 'outside world.'" [13]

We must question Nature intelligently and coherently. Before the days of Bacon men worshiped formulæ, and modern science has not escaped the same blunder. Langley wrote: "The history of the past shows that once most philosophers, even atheists, regarded the 'Laws of Nature,' not as their own

[13] *The Grammar of Science,* pp. 82, 86, 87, and 99.

interpretations of her, but as something external to themselves, as entities partaking the attributes of Deity — entities which they deified in print with capital letters — as we sometimes do still." [14]

Romanes in the days of his discipleship to Spencer, writing anonymously as "Physicus" (1876), defended his master's postulate that "uniformity of law inevitably follows from the persistence of force." But the scientific law of the Conservation of Energy explicitly recognizes the certain dissipation of all forms of force, and even the correct formula does not in any way explain the multiplication of forces, and the variety, and yet order of cosmic phenomena. The dissipation of energy, which Spencer seemed to ignore, is held by scientists of the rank of Lord Kelvin as involving the fact that the present order of things cannot be eternal. Sometime before 1889, after a correspondence with Charles Darwin, Romanes began to return to his earlier faith in God and wrote: "As a theory of causation it (Spencer's formula) has not met with the approval of mathematicians, physicists, or logicians, leading representatives of all these departments having expressly opposed it, while, so far as I am aware, no representative of them has spoken in its favor. . . . It is, in short, the old story about a stream not being able to rise above its source. Physical causation cannot be made to supply its own explanation, and the mere persistence of force, even if it were conceded to account for particular cases of physical sequence, can give no account of the ubiquitous and eternal direction of force in the construction and maintenance of universal order." [15]

3. *If every phenomenon must have a cause, the First Cause itself cannot be uncaused*

The answer is not difficult. *A true efficient cause is not a phenomenon at all, but an act of will, a spiritual force.* Secondary causes are only instrumental and an infinite succession of such causes does not satisfy our idea of cause, which

[14] *Science,* June 13, 1902.
[15] *Thoughts on Religion,* pp. 72 and 74.

springs from our consciousness of power freely exercised. Efficient causation by will, though mysterious, is involved in the very idea of personal beings, divine or human.

But this position is not self-evident to all men for, as we have seen, some scientists declare they can conceive an infinite regress of physical causes without a beginning. But the philosophic and the common mind agree in ruling out this idea simply because they both recognize that the one source of the idea of causation is the human will. We must think of the world in terms of our experience, and the normal mind uses its whole experience; it does not omit but places first human relations and postulates of ethical life in which the will plays a supreme part. Hence it cannot possibly rest in secondary causes for they could not produce permanent order.

In all human relations and actions we sharply distinguish between instrumentalities and real cause, or a will acting with definite purpose. This is a distinction all languages recognize. Children at play can understand the difference between an intentional blow and accidental contact. Even when very young the contrast is clear to them between the personal will and the instrumentality used, as is seen in the case of the little girl who tried to avoid punishment for cutting off her curls. "I didn't do it," she explained, "the scissors did." All normal life is based on this principle. If a man is found dead on the street with a knife in his heart the question at once asked is, "Who used the knife?" and then, "What was his motive?" If there is no motive the murderer is judged insane. The will does not of course create force, but it does direct and rule the muscular power of the body for its own ends, and this activity is ever conscious and intelligent. Such action begins with a little child moving its hands first aimlessly but later with a clear purpose. As knowledge increases the child is able to direct and control his physical forces.

The will both exercises force and feels force. For instance a twenty pound weight presses my arm down, and I am conscious not only of the pressure, but also of active resistance of my own power to that pressure. Herbert Spencer admits that

all other modes of consciousness are derivable from experiences of force, but experiences of force are not derivable from anything else; thus the force by which we ourselves produce changes, and which serves to symbolize the cause of changes in general, is the final disclosure of analysis.

It is our power to put force in motion which makes us infer similar power in cases where we are not responsible. James Martineau tells us that physical force is will-power, from which in common speech we omit all reference to the living Thought and Will back of the world which gives it order and permanence. It is usually only in cases of unusual events or happenings of moment that we refer to the Divine purpose back of them.

Professor Brinton in discussing the religions of primitive peoples writes, "This universal postulate, the psychic origin of all religious thought, is the recognition, or, if you please, the assumption, *that conscious volition is the ultimate source of all force.* It is the belief that behind the sensuous, phenomenal world, distinct from it, giving it form, existence, and activity, lies the ultimate, invisible, immeasurable power of a Mind, of a conscious Will, of Intelligence, analogous in some way to our own; and — mark this essential corollary — *that man is in communication with it.*" [16] W. R. Grove closed his epoch-making essay on *The Correlation of Physical Forces* with the thought that "Causation is the will, and creation the act, of God."

[16] *Religions of Primitive Peoples,* p. 47.

CHAPTER IV

THE WITNESS OF THE INTELLECT

THE TELEOLOGICAL ARGUMENT

The fact that phenomena are not isolated and chaotic but interrelated and orderly, producing and maintaining a Cosmos, implies that "final" causes are at work, that is to say, causal forces which finally realize an end or purpose foredetermined by an intelligent and conscious mind. A final cause is an efficient cause which begins with a plan that is realized in the process.

The derivation of the name teleological gives the key note of the argument. Τέλος has two meanings, (1) the end proposed. Hence it conveys the ideas of purpose and fulfilment, or of a plan consistently worked out to its realization. It includes both the Formal and the Final Causes of Aristotle;[1] and (2) consummation, result, completion — but not necessarily cessation — Latin *effectus*.

Forces acting alone would be as apt to produce chaos as order, or if chaos existed there would be no power in it to bring it into order. As we look about us on the interrelated forces of this stable universe, the conviction arises that the orderly arrangement of matter and force resulting in harmony must be the expression of an intelligent Mind. Hence the universe must have an Ordainer, a Mind back of and controlling all the forces at work and imposing on them definite and fixed methods of working which we call laws of nature. The Cosmological Argument, being concerned only with the fact of causation, has nothing to do with the Cosmos as a whole, but in ordinary thought it is rarely separated from the

[1] See Note B.

Teleological, which argues directly from the world's order to a divine Ordainer, adding to the idea of a supreme First Cause the higher concept of His conscious direction of the world.

Physical causation may be studied in a single series of phenomena and, as long as we work within these narrow limits, physical causes seem sufficient, for we are not concerned with the larger aspects of the universe. But these larger aspects cannot be ignored without serious loss and danger, as Bacon warns us: "A little philosophy inclineth Man's mind to atheism, but depth in philosophy bringeth men's minds about to religion; for while the mind of Man looketh upon second causes scattered, it may sometimes rest in them, and go no farther; but when it beholdeth the chain of them confederate, and linked together, it must needs fly to Providence and Deity." [2] The phrase "causes confederate," which Bacon here coins, is suggestive and worth remembering as a safeguard against error. It is really impossible, save by pure abstraction, to isolate any series of phenomena in the universe.

The Teleological Argument embraces two lines of connected thought, not always distinguished — the Eutaxiological, starting from the order of nature as a whole, and the Teleological or Design Argument proper, which studies the general order in the details of its special adaptations and contrivances, more particularly in the organic world. The distinction may be made clear by falling back on Aristotle's Formal (Eutaxiological) and Final (Design) Causes. Both imply mind. In the Formal Cause we have the idea of an end in itself, perfect if not realized, as Beethoven's *Symphony* was complete in his mind before he wrote it out. When we look upon the harmony of the universe we realize that the Cosmos was in the Divine Mind as a whole in all its parts and relations even before He brought it into existence. The Final Cause is the intent and purpose of the action, and it commonly relates to something beyond itself. Final Causes may be seen in the way the parts of a machine work in relation to the whole and also have each their special purpose. Better still can final causes

[2] *Essay XVI, of Atheism.*

be studied in an organism where all parts work for the common good. We may think of the formal cause as a vast system of things forming a Cosmos in which the final causes work together each in its appointed time and place.

In the Psalms we see the poet grasping the distinction. In the 19th Psalm we find the Eutaxiological Argument of inferring a mind from the world order as a whole thus expressed:

"The heavens declare the glory of God; and the firmament showeth His handiwork. Day unto day uttereth speech, and night unto night showeth knowledge."

In the 94th Psalm, however, the Psalmist considers the details of the world order and argues a Divine Mind from the adaptations there seen, thus using the Design Argument:

"Consider, ye brutish among the people; and ye fools, when will ye be wise? He that planted the ear, shall He not hear? He that formed the eye, shall He not see?"

Of the two arguments the Eutaxiological is the stronger proof of God, but the average mind does not readily distinguish between them.

The Eutaxiological Argument

The Eutaxiological Argument considers the universe as a whole. Back of the order of the universe and as the cause of that order, there must be an intelligent Will. The postulate is that a universe intelligible to mind must be the product of Mind. A world of order presupposes a world Ordainer. What reason finds in nature, Reason first placed there. As we have said, this Order Argument is simply Aristotle's Formal Cause applied to the Cosmos. In his profound thought the *form* of a thing is its *essence* as it exists in the divine mind, the ground and source of its qualities and properties when embodied in nature through the divine *energy,* as a beautiful statue has *form* in the artist's vision before he carves it in marble.

It is an old argument, though not so popular as the Design Argument. It is common in the Bible. Jehovah answers Job by an appeal to the wonder and greatness of the universe,

until the suffering man responds in humility, "I know that Thou canst do all things, and that no purpose of Thine can be restrained."[3] It is the instinctive faith of the Psalmists and the Prophets. In the 104th Psalm the Psalmist sings of Jehovah's care over all His creation, and cries, "O Jehovah, how manifold are Thy works! In wisdom hast Thou made them all."[4] Isaiah in his attack on idolatry frequently compares the might of God to the impotence of the idols by reference to the greatness of the universe. "It is He that sitteth above the circle of the earth, and the inhabitants thereof are as grasshoppers; that stretcheth out the heavens as a curtain, and spreadeth them out as a tent to dwell in."[5]

Socrates, Plato and Cicero use this argument as self-evident. Thus Cicero questions: "Can anything done by chance have all the marks of design? Four dice may by chance turn up four aces; but do you think that four hundred dice, thrown by chance, will turn up four hundred aces? Colors thrown upon canvas without design may have some similitude to a human face; but do you think they might make as beautiful a picture as the Coan Venus? A hog, turning up the ground with his nose, may make something of the form of the letter A; but do you think that a hog might describe on the ground the Andromache of Ennius?"[6] Socrates in conversation with Euthydemus draws the analogy between the control of the universe by God and the control of the body by the soul of man. "And that I speak the truth, you yourself also well know, if you do not expect to see the bodily forms of the gods, but will be content, as you behold their works, to worship and honor them. Reflect, too, that the gods themselves give us this intimation: . . . and he (the supreme God) that orders and holds together the whole universe, in which are all things beautiful and good, and who preserves it always unimpaired, undisordered, and undecaying, obeying his will swifter than thought and without irregularity, is Himself manifested only

[3] Job 38 to end.
[4] Vs. 24.
[5] Isa. 40: 22.
[6] *De Divinatione.*

in the performance of his mighty works, but is invisible to us while he regulates them. . . . The soul of man, moreover, which partakes of the divine nature if anything else in man does, rules, it is evident, within us, but is itself unseen. Meditating on these facts, therefore, it behoves you not to despise the unseen gods, but, estimating their power from what is done by them, to reverence what is divine." [7]

A similar treatment of this argument by Theophilus, Bishop of Antioch (*circa* 168), in his writings to Autolycus is worth quoting because of his apt illustrations. "For as the soul in man is not seen, being invisible to men, but is perceived through the motion of the body, so God cannot indeed be seen by human eyes, but is beheld and perceived through His providence and works. For, in like manner, as any person, when he sees a ship on the sea rigged and in sail, and making for the harbor, will no doubt infer that there is a pilot in her who is steering her; so we must perceive that God is the governor (pilot) of the whole universe, though He be not visible to the eyes of the flesh, since He is incomprehensible. . . . Then again, an earthly king is believed to exist, even though he be not seen by all, for he is recognized by his laws and ordinances, and authorities, and forces, and statues; and are you unwilling that God should be recognized by His works and mighty deeds?" [8] Clement of Rome also uses this argument of the world order,[9] and Hilary of Poitiers asks, "Who can look on nature and not see God?"

Nature may be likened to a book and its phenomena to words which are intelligible only to minds familiar with the language used. The cuneiform characters of the Chaldeans were at first meaningless and seemed mere scratches to the ignorant. But their regularity showed them to be the product of mind, and so in due time other minds deciphered them. Nature's phenomena arouse in our minds certain intuitive judgments, and we recognize definite order and relations which do not in-

[7] *Mem.* IV: 3, 13, 14.
[8] Bk. I: 5.
[9] Corinthians, Epis. I, Chap. XX.

here in the sensible things themselves, any more than thoughts inhere in written words apart from minds. The brutes see Nature's movements and changes, but they see no meaning in them. Tertullian said, "Man speaks in words, God speaks in acts." Socrates declared that Anaxagoras spoke like a sober man among drunkards when he taught that νοῦς was the cause of the world's order. Aristotle echoes the great teacher's opinion when he says that mind is the beginning and end of the Cosmos (Ἀρχὴ καὶ τέλος κόσμου νοῦς).

This argument from the world order was defended by Kant in his earlier writings, questioned in the *Critique of Pure Reason,* and practically accepted in that of the *Judgment.* In his early work on a *Demonstration of the Existence of God* (1763) and his essay on the *General Natural History and Theory of the Heavens* (1754) he tells us that this proof is as old as the reason of man. It is so natural, so engaging, and grows so much stronger with the progress of our knowledge that it must last as long as there is a rational creature who wishes to enjoy contemplation of God in His works. "Matter, which is the primary substance of all things, is itself bound to certain laws according to which it must produce necessarily beautiful combinations. It has no freedom to deviate from this plane of perfection. Because it is in this manner subdued to a high and wise design, it must of necessity be arranged in corresponding proportions by an overruling First Principle, and there is precisely for this reason a God, because nature even in chaos can proceed in no other way than in regularity and in order." [10]

In the moral realm Kant finds the culmination of his proof. Not only do the universal laws of Nature's order point to a Supreme Being as the principle of systematic unity, but the inner moral order expressed in the categorical imperative of duty points even more clearly to a single, primal Being as its source.

Herbert Spencer and his school reject Kant's position with

[10] *Natural History of the Heavens,* Preface. For Kant's statement the teleological proof of God see Note E.

the blunt denial that mind is needed anywhere. Evolution is its own cause, and it does not admit of any preexisting mind. But in this his fellow scientists do not all agree with him, for as Huxley said, "The teleologist can always defy the evolutionist to disprove that the primordial molecular arrangement was not intended to evolve the universe."

In biological evolution there is actual physical continuity of life, a link between parents and offspring. But there is not such continuity in the inorganic world. There we see only a succession of physical changes. If we apply evolution to the inorganic world, then the ruling idea in the successive changes must be without, that is, different from the mechanical succession of phenomena, for there is no inner life-force causing the definite movement as in the biological development of species, one proceeding for the other.

We speak of the evolution of the rifle from the bow and arrow, but the development is entirely within the minds of men successively improving their weapons of offense. It is a curious fact that the mechanical analogy which most materialists use to explain the universe involves them in direct contradiction. All machines without exception are the creation of intelligent and purposive agents, and all machines are the direct and apparent embodiment of specific purpose. A worse analogy than that of a machine could scarcely have been devised from the point of view which seeks to treat Nature as a self-existing, purposeless system. For no machine ever made itself, nor will any machine really maintain itself in action without the supervision and assistance of intelligence of the same kind which originally devised and started it. A machine is a structure specially devised to perform work of a given kind. It is the very incarnation of purpose. In short the vast difference between living things and a machine — even the world machine — is that the one is controlled by an indwelling, intelligent force, and the other is molded by outside forces. There may be knowledge as to the work done by the machine, but the knowledge is not in the machine; there may be great skill, but the skill is not in it; great fore-

sight, but the foresight is not its own. Whatever it does by virtue of its construction is done through a mind which creates it for its own purpose.

Romanes speaks of the value of the argument from world order as follows: "I think it is perfectly clear that if the argument from teleology is to be saved at all, it can only be so by shifting it from the narrow basis of special adaptations, to the broad area of Nature as a whole. And here I confess that to my mind the argument does acquire a weight which, if long and attentively considered, deserves to be regarded as enormous. For, although this and that particular adjustment in Nature may be seen to be approximately due to physical causes, and although we are prepared on the grounds of the largest possible analogy to infer that all other such particular cases are likewise due to physical causes, the more ultimate question arises, How is it that all physical causes conspire, by their united action, to the production of a general order of Nature? It is against all analogy to suppose that such an end as this can be accomplished by such means as those, in the way of mere chance or the fortuitous concourse of atoms. We are led by the most fundamental dictates of our reason to conclude that there must be some cause for this cooperation of causes. I know that from Lucretius' time this has been denied; but it has been denied only on grounds of *feeling*. No possible *reason* can be given for the denial which does not run counter to the law of causation itself." [11]

Many scientific men who question the design argument admit the wider teleology of nature's harmony as a system. The phrase, the Reign of Law, expresses the whole argument concisely, for universal law implies a universal Law-giver, one as the universe is one. However, the Reign of Law is an ambiguous expression. As used by the Duke of Argyll, it means the faithfulness of all the forces and powers of the universe to the laws imposed upon them by their Creator through His own indwelling in the universe. But Grant Allen, the novelist, makes the very obedience of Nature to order an argu-

[11] *Thoughts on Religion*, p. 70.

ment for the universe as a self-evolved and self-ruling system. This line of thought ignores the supreme importance of the fact which Kant emphasized,[12] that it is mind which discovered the laws of nature and comprehends them, as follows from the obvious fact that we constantly use these forces in new combinations. Only a conscious Mind working to definite ends in perfect harmony could impose on the universe the marvelous interrelation of the infinite forces ever at work and producing order, never disorder. What mind finds, the universal Reason must have placed there for minds.

Science assumes the rationality of nature. It asks intelligent questions and receives intelligent answers, for the world is constructed on the same mathematical principles on which our minds work. Pythagoras taught that "number is the principle of all things," and we find the same thought in Isaiah 40:12, where the prophet describes Jehovah as the One "Who hath measured the waters in the hollow of His hand, and meted out heaven with the span, and comprehended the dust of the earth in a measure, and weighed the mountains in scales, and the hills in a balance." So, too, in Wisdom 11:20, "Thou hast ordered all things in measure and number and weight." The ancients could not test this by delicate experiments, as we can, for they lacked our instruments and our wide scientific knowledge, yet all modern science confirms their view, since all departments of natural physics tend to become mathematical, and their final conclusions to be summed up in quantitative formulæ. We find that every crystal is built on a definite plan, each is a piece of "frozen geometry." In the science of optics, mathematical formulæ are indispensable, and each color has its algebraic symbol expressive of its wave lengths in the ether. The most decisive proof that the principles of our minds and the mathematical relations of the universe are identical is seen in our power of prevision, as in the case of the discovery of Neptune, and Mendeléeff's theory of the periodic law of atomic weights.[13]

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[12] Preface to the 2nd edition of the *Critique of Pure Reason.*

[13] See Note F.

If it takes mind to construe the world, how can mind be absent from the process through which the world has been developed? The teleological instinct in man cannot be suppressed. Our acceptance of reasonableness in the universe is as positive as our acceptance of scientific principles. No ingenuity of philosophical scepticism can bring us to intellectual confusion. There is in every earnest thinker a craving after design and purpose, and belief in them can be no more denied him than belief in the objective world.

Berkeley, the first idealist of Britain, rested his whole proof of God upon the Eutaxiological Argument. As we infer the existence of other "spirits" from the words and deeds of men, so with equal certainty can we infer God's existence from mind-marks in Nature.[14] But he weakened rather than strengthened the old belief in God's revelation of Himself in nature by his denial of the objective reality of matter. All that he meant to teach — God's intimate relation to the world — is more simply conceived under the form of objective Idealism, which considers matter to be external and real, but possessing its form and qualities, power and activities, and wondrous order only through the indwelling and informing spirit of the living God. Professor Fraser, Berkeley's best editor, holds that in later works he did approximate this view.

The Design Argument

The Design Argument has been the mainstay of Natural Theology, and is probably the oldest and simplest principle, but our knowledge of animal forms and functions now enables us to use a greater variety of illustrations. Aristotle's philosophy is teleological throughout, and he emphasized the distinction between inorganic formations and organic growth. Socrates and Cicero state the argument as clearly as it has ever been done since. One of the founders of the Royal Society of London (chartered 1662) was the scientist, Robert Boyle, who made a study of science with special reference to Natural Theology. His will (1692) founded the celebrated Boyle Lec-

[14] For a statement of Berkeley's views see Note G.

tures, which are still maintained, in which the proofs of the Christian religion are set forth. The Bridgewater Treatises are a similar foundation. The Eighth Earl of Bridgewater established them by will (1829) to show "the power, wisdom, and goodness of God as manifested in the creation." Paley was the main exponent of this argument at the beginning of the last century and, though his work, *Natural Theology,* has been superseded, it is still useful for its clearness. John Stuart Mill admits that the design argument is a legitimate and purely inductive argument.

This argument moves on the line of final cause, not *from design* but *to design,* from the appearance of contrivances in organic nature to intelligent purpose in their Maker. The objection has been raised that the final cause is in itself no cause at all, that only an efficient cause can ever act. This is true enough, but a real efficient cause is ever a conscious agent, and as such always acts with a purpose which forms the end at which he aims.

It is often called the "Argument from Design," but that begs the question. If we grant there is a design, there is of course a Designer — but design itself is the point to be proved. We must start with what seem contrivances in nature, that is, combinations of matter of different kinds and qualities which lead to a certain definite result in an organism. Only a mind working with an end in view could bring together such an assemblage of diverse material as a watch or a rifle. No less true is it that when we observe certain contrivances in the field of vegetable and animal life made of so many different parts, all converging to a common function, our reason compels us to believe that a certain accord must exist between the past and the future, an active principle determining the process of growth from within. Final causation is both the aim and the final result or end when the process is completed.

We start then with marks of design or contrivance in nature. But what are marks of contrivance? How may we know that there has been any contrivance beyond the power of accidental forces? The answer is the same as that to the ques-

tion, How do we know that a thing has been made by a man? Whenever things, which in nature are never found together, are conjoined in an artificial way, we conclude at once that they are due to human action and have a purpose, even if it is not at once clear to us. For example, brass hemispheres were found in the ruins of Ninevah which were covered with peculiar marks. Though no one at the time understood them, they were considered unquestionably the work of man. Later it was found that they were sun-dials.

Mill puts the argument in its logical form as follows: "Certain qualities, it is alleged, are found to be characteristic of such things as are made by an intelligent mind for a purpose. The order of Nature, or some considerable parts of it, exhibit these qualities in a remarkable degree. We are entitled, from this great similarity in the effects, to infer similarity in the cause, and to believe that things which it is beyond the power of man to make, but which resemble the works of man in all but power, must also have been made by Intelligence, armed with a power greater than human." [15]

He discusses the logical method of the argument in detail by using the eye as an example: "The parts of which the eye is composed, and the collations which constitute the arrangement of those parts, resemble one another in this very remarkable property, that they all conduce to enabling the animal to see. . . . We are therefore warranted by the canons of induction in concluding that what brought all these elements together was some cause common to them all; and inasmuch as the elements agree in the single circumstance, of conspiring to produce sight, there must be some connection by way of causation between the cause which brought those elements together, and the fact of sight. This I conceive to be a legitimate inductive inference, and the sum and substance of what Induction can do for Theism. The natural sequel of the argument would be this. Sight, being a fact not precedent but subsequent to the putting together of the organic structure of the eye, can only be connected with the production of that struc-

[15] *Essays on Theism,* Part I, *Marks of Design in Nature.*

ture in the character of a final, not an efficient cause; this is, it is not Sight itself but an antecedent Idea of it, that must be the efficient cause. But this at once marks the origin as proceeding from an intelligent will." [16] Mill does not admit the conclusion, for he argues that the eye could have originated on the principle of "the survival of the fittest" without mind being present in the process. The answer to this claim will be given in the next chapter.

Spencer admits that a main point of difference between inorganic objects and living things is that the former belong as it were to the past, while there is a steady preparation in plants and animals for their coming environment and even for the good of the young still unborn. But, like Mill, he will not admit that this guiding principle, or formative power, springs from or depends on a Consciousness working intentionally on the line of final causation, or that there is a prophetic element in the whole process working in the present for the foreseen end.

The Design Argument is analytical rather than constructive. It studies the *parts* of a given phenomenon which give it its character. Its special field is the organic world. It has, however, been discredited because of its misuse along two lines, first, a confusion of the extrinsic and the intrinsic uses of an organ, and second, a supposition that everything in nature has been made for man's use and convenience.

1. The intrinsic use of an organ is the function which it performs in the economy of the animal's life. The extrinsic use is any use to which it may be put other than the end for which it was originally designed. For instance, the black fluid of the cuttle fish was not intended for ink, nor was the cow's horn created to hold powder for muskets. We may put anything to any use which does not involve cruelty to the animal world, but in so doing we must not misunderstand the purpose for which that organ was originally created.

2. The second fallacy is more subtle and real, since man is prone to consider himself the end of creation and all things as having been made for his good. Sometimes this fallacy is at work even when man is convinced of his insignificance in the universe. Sir G. G. Stokes tells us that in course of conversation with Sir David Brewster he asked him what his objection was to the theory of undulations, and he

[16] *Ibid.*

found he was staggered by the idea of filling space with some substance merely in order that "that little twinkling star," as he expressed himself, should be able to send its light to us.[17] This mistake leads often to ludicrous statements, as when the peasant moralized on the goodness of Divine Providence which always makes large rivers flow by great cities.

This fallacious use of the argument has led to much satirical comment from such men as Voltaire, who says that as "noses are made to bear spectacles, let us wear spectacles."[18] Pope is unsparing in his effort to humble presumptuous man:

> "Know, Nature's children all divide her care;
> The fur that warms a monarch, warm'd a bear.
> While man exclaims, 'See all things for my use!'
> 'See man for mine!' replies a pampered goose:
> And just as short of reason he must fall,
> Who thinks all made for one, not one for all."[19]

Those who have in this way wrongly used the argument of final causes have often done so sincerely, for there are some adaptations in nature of which man has made good use, but which in themselves seem to have no functional purpose. For example, the gap between the horse's teeth has appealed to man as made especially for his bit and bridle. But even if we are ignorant of the real final cause of an organ we have no right to assume that it was made for our special use.

"If we sum up what is common in all the abuses we have just instanced, we shall see that the error does not consist in admitting final causes, but in assuming false ones. That there are erroneous and arbitrary final causes there is no doubt; that there are none at all is another question. Men are as often mistaken regarding efficient as regarding final causes; they have as often attributed to nature false properties as false intentions. But as the errors committed regarding the efficient cause have not prevented scientists from believing that there are true causes, so the illusions and prejudices of the vulgar with respect to final causes ought not to determine philosophy to abandon them altogether."[20]

Helmholtz's criticism of the eye has been misquoted as if the scientist were blaming the Creator for not doing better work. Helmholtz simply demonstrated that the eye was not an instrument of precision, and also that it ought not to be so. One eye corrects the defects of the other, and both together give us adequate sight. "The appropriateness of the eye to its end exists in the most perfect manner, and

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[17] See Burnett, *Lectures on Light*, p. 15.
[18] *Candide.*
[19] *Essay on Man*, III, 43–48.
[20] Janet, *Final Causes*, p. 191.

it is revealed even in the limit given to its defects. A reasonable man will not take a razor to cleave blocks; in like manner, every useless refinement in the optical use of the eye would have rendered that organ more delicate and slower in its application." [21]

Kant's criticism, that this argument leads only to the idea of an "architect" and not of an infinite Creator, does not affect its validity, for he admits that it does reveal a Mind commensurate with the known universe in all its vastness, which is all we are concerned with at this stage. The idea of Infinity belongs to the Ontological Argument. We do not admit that it implies the "deistic-carpenter idea" of God.[22]

This argument is fully consistent with theistic faith in the Divine Immanence and may be expressed in biological as well as in mechanical terms. It rests on the accepted biological and anatomical principle, that every organ and structure has, or did once have, some function useful to the organism in which it is found. We argue that such complex adaptations cannot be the result of "accidental," *i.e.*, unguided, forces in the environment, but must proceed from a divinely directed life force working within the germ cell to the final realization of its proper form in the adult animal. Thus stated, it is strongly reenforced by the wider teleology involved in the theory of evolution. Despite its abuses the doctrine of final causes is valid and convincing, and some of the Bridgewater treatises are today being quoted with approval by scientific writers who a short while ago rejected the teleological point of view. In our present state of knowledge the adaptations in nature seem to afford a large balance in favor of causation by intelligence.

We may well expect the Teleological Argument to find its focus and battle-ground in the relation of evolution to Theism. If the evolutionary process is a purely unguided, mechanical affair, then all organic life, which is a vast section of creation, falls beyond the reach of teleology. God's action in the organic world must be immanent and directive if the teleological view is of any value.

The chief ground of popular dislike of Darwinism was

[21] *Revue des cours publics scientifiques,* 1 re. série, t. vi, p. 219.

[22] For the criticisms of final causes by Spinoza, Bacon, and Descartes see Note H.

along the lines of teleology. It is true that Darwin did believe that he had discredited the design argument by showing that organisms are evolved gradually and not made at once. But he was a better observer than reasoner, and his friends Asa Gray and Dana repudiated his shallow conclusion from the first. Darwin had studied only Paley, who is so deistic that when the great naturalist came in contact with life and could get no help from Paley, he took the opposite view and considered the theistic position overthrown. He writes in his autobiography, "The old argument from design in Nature, as given by Paley, which formerly seemed to me so conclusive, fails, now that the law of natural selection has been discovered. We can no longer argue that, for instance, the beautiful hinge of a bivalve shell must have been made by an intelligent being, like the hinge of a door by man. There seems to be no more design in the variability of organic beings, and in the action of natural selection, than in the course which the wind blows." [23]

Romanes, though he changed later, wrote in his earlier days that two hypotheses only are in the field; intelligent design and natural selection, and it would be proof positive of superior action if it could be shown that living things were suddenly introduced in perfect form, but if they were slowly evolved the old idea has been forever destroyed. The absurdity of this becomes evident if we paraphrase it that, as soon as we see *how* God works, that is, by evolution, it follows that He does not work at all. Huxley made merry over Paley's illustration of the "untutored savage" picking up a watch and inferring design, saying, "What we want is a watch that can make itself." He evidently did not know that Paley had anticipated his criticism, stating explicitly that even if the watch grew from a seed, the design would be no less plain. Huxley later admitted that the evolutionist who holds the orderly development of animal forms cannot deny the possibility of a divine teleology implanted within the organism.

No wonder Christians took alarm when prominent evolutionists were proclaiming that there is no design in nature. But

[23] Francis Darwin, *Life and Letters of Charles Darwin*, Vol. I, p. 278.

they need not have been so concerned. Asa Gray criticises Darwin for not being able to refrain from teleological language. "Intention is the one thing he does not see clearly, and when he does not see it he searches for it diligently." Again he writes: "Of course we believers in design make the most of your frank terms expressing design and intention, and smile at your attempts to change these contrivances into mechanical results." The following may be one of the passages that Gray has in mind, in Darwin's book on orchids. "The strange position of the labellum, perched on the summit of the column, ought to have shown me that here was the place for experiment. I ought to have scorned the notion that the labellum was thus placed for no good purpose; I neglected this plain guide, and for a long time completely failed to understand the structure of the flower." [24] John Fiske claims that "the Darwinian theory properly understood, replaces as much teleology as it destroys." [25] The real effect of Darwinism on teleology is thus given by E. Ray Lankester: "Darwin's theory had as one of its results the reformation and rehabilitation of teleology. According to that theory, every organ, every part, color, and peculiarity of an organism, must either be of benefit to that organism itself or have been so to its ancestors: no peculiarity of structure or general conformation, no habit or instinct in any organism, can be supposed to exist for the benefit or amusement of another organism, not even for the delectation of man himself. Necessarily, according to the theory of natural selection, structures are either present because they are selected as useful or because they are still inherited from ancestors to whom they were useful, though no longer useful to the existing representatives of those ancestors. The conception thus put forward entirely refounded teleology. Structures previously inexplicable were explained as survivals from a past age, no longer useful though once of value. Every

[24] *The Various Contrivances by which British and Foreign Orchids are Fertilized*, Chap. VI.
[25] *Destiny of Man*, p. 113.

variety of form and color was urgently and absolutely called upon to produce its title to existence either as an active agent or as a survival. Darwin himself spent a large part of the later years of his life in thus extending the new teleology." [26]

Lord Kelvin never swerved from the belief that back of the universe was God whose work was always immanent. "I feel convinced," he said, "that the argument of design has been too much lost sight of in the modern study of biology"; and Weismann declares that the main problem which the organic world offers for our solution is the purposefulness of all things. Weber puts his conclusions in questions which the opponent of teleology cannot answer: "Does not the Darwinian principle, which materialism invokes with such absolute confidence, corroborate, rather than overturn the hypothesis of immanent teleology? Is it really true that the *struggle for existence* is a *first* cause and exclusively mechanical? Does not the struggle for life, in turn, presuppose Schopenhauer's *will-to-live, will* or *effort,* without which, according to the profound remark of Leibnitz, *there can be no substance?* Does it not therefore, presuppose an anterior, superior, and immaterial cause? What can the formula: struggle *for* existence, mean, except: struggle *in order to* exist? Now, that carries us right into teleology. Besides, we cannot deny that the entire Darwinian terminology is derived from the teleological theory: the terms, *selection, choice,* evidently introduce an intellectual element into nature. These are mere images, it is said, or figures of speech. Very well. But does not the very impossibility of avoiding them prove the impossibility of explaining nature by pure mechanism?" [27]

Christian thinkers again see that nature's facts are God's acts. Organic evolution, so far as it is an accurate description of the development of life, is a revelation of God's method of creation in the organic world by continuous and progressive modifications from within, instead of by discontinuous and in-

[26] 9th edit. *Encyclopedia Britannica,* Vol. XXIV, p. 802.
[27] *History of Philosophy,* pp. 572, 3.

stantaneous *fiats* from without, its analogy being organic growth, not mechanical action. The whole process reveals an immanent teleology guiding and determining the end from the beginning.

(For a criticism of Darwinism see Note I.)

CHAPTER V

THE TELEOLOGICAL ARGUMENT (Continued)

ORGANIC EVOLUTION IN RELATION TO THEISM

In any account of the relation of evolution to theism it is necessary at the outset to define clearly the limits of the discussion. This is the more necessary because the term "evolution" has obtained the widest possible connotation from being applied to both inorganic nature and human society, whereas its original application was simply to the organic world. Animals are formed out of the substance of their parents. There is a physiological bond between successive generations which permits of gradual modifications through an internal law. On the other hand the material world is modified, at least on its surface, by physical forces working from without. If we apply the word evolution to Nature's mechanical processes, we must either give up any actual continuity of plan, or else locate the developing process, or law, not in the phenomena, but in some mind controlling the processes to a definite end. As the continuity is not physiological through generation, it must, as Kant held, be extrinsic to and distinct from the physical forces. What trace is there outside of the organic world of any continuity whatever between phenomena, except that of time succession, which divides instead of unites events? It is not the mere persistence of force, but the presence and action of Mind guiding by laws the formation of the Cosmos, which gives us the physical world as we know it.

On the other hand, we have no right to ignore the division between animal and human life. The idea of man as the only fitting climax to the long creation is a very old one. Aristotle

led the way, but was followed by such men as Herder, Kant, Coleridge and Herschel. But however much man may owe his physical body to his being the culmination and highest product of the process of evolution, no one has a right to consider his further development as no different in kind from his physical evolution. It is not hard to point out the fundamental differences between man's progress and the brute's evolution. In the animal it is a necessary process, while in man instinct yields to conscious intelligence. The brute progresses physically under material environment with no power over it, but man is able to change or improve his environment and be in some degree its master. The phenomena of evolution under necessity stand in sharp contrast to evolution under freedom where mind determines the process. Man reasons in terms of pure thought while the animal feels in terms of sensation and has no reflective power. Man alone has a language with abstract terms. In man the struggle for existence becomes a moral principle, developing the spiritual being. When man attained full consciousness, conscience took the place of desire and formed his governing principle. The will rose into supremacy and man became a person. He was no longer under the physical law of force in nature; he became himself a force acting on nature and on his fellow men. Man alone conceives the infinite and worships God. The brute is but a step in the process; man represents the highest attainment of evolution.

From the above it can be seen that discussion should be excluded both of the formation of the inorganic world and of the social and ethical progress of man. In what follows, therefore, the term evolution is confined, as it should be, to the progressive development of organic life.

The fundamental principle in evolution is the unbroken continuity of life, all organisms being derived from preceding living things, till we reach in thought the primeval germ cells. All scientific thinkers believe in the unbroken continuity of life, but differ widely as to the cause and method of the variations in living forms.

There are three contributory sciences which have established the theory of descent beyond doubt. These are Embryology, Comparative Morphology, and Palæontology. Of the first named it will be more convenient to speak at length below, but the other two can be briefly treated here.

The evidence afforded by Comparative Morphology is that large groups of species of widely different habits present the same fundamental plan of structure; that parts of the same organism, the functions of which are very different, likewise exhibit modifications of a common plan, and that structures in a rudimentary and apparently useless condition in one species of a group are fully developed and have definite functions in other species of the same group. Further there is the fact that species fades into species, and genus into genus, so that in classification it is possible to construct a tentative genealogical tree. In dealing with comparative anatomy it is necessary carefully to distinguish between homologous and analogous structures. The former term is applied to the deep resemblance in architecture between two or more structures in different organisms, and also in their manner of development; the latter concerns resemblance in use or function only. Owen has a clear distinction between them: (1) The wing of a bird and the arm of a man; they are both fore-limbs, with fundamentally the same structure as regards bones and muscles, nerves and blood-vessels; they are homologous, but not analogous. (2) The wing of a bird and the wing of a butterfly; they are both organs of true flight, but they have no structural or developmental resemblance; they are analogous, but not homologous. (3) The wing of a bird and the wing of a bat; they are fore-limbs of similar structure and development; they are both organs of true flight; they are at once homologous and analogous.[1]

In Comparative Morphology we are concerned only with homologies, and their evidence seems indisputable as to the evolutionary descent of the organisms from a common stock. For instance there is the same fundamental structure and arrangement of bones, muscles, nerves, and blood vessels in the arm of a frog, the paddle of a turtle, the wing of a bird, the fore-leg of a horse, the flipper of a whale, the wing of a bat, and the arm of a man, though they have all been profoundly modified from the common plan. Another interesting instance is that of the venous system in man. It was long ago established that the presence of the valves in human veins was for the function of preventing the blood from flowing back toward the capillaries. But the irregularities in the system were unintelligible. The veins of the arms and legs seemed all right, but there were no valves in several of the spinal, abdominal and liver veins, and above all in the vena cava,

[1] As given by Geddes and Thomson, *Evolution*, p. 43.

the largest vein in the body carrying blood upward. To make the matter more incongruous there were valves in the intercostal veins in which the blood flows horizontally, and in the neck in which the blood flows downwards. If the theory of evolution be true, man's ancestors were quadrupeds, and the time during which he has walked upright is insignificant compared with the time during which they walked on all fours. The structures developed in his ancestors and not yet modified to suit his new posture should be expected to hold anomalous relations. Thus the general distribution of valves in the veins is the same in man as in the mammals near him, and when he is placed on all fours the arrangement of the valves is perfectly intelligible. The veins of the limbs, the jugular and intercostal veins, then carry blood upward; and the vena cava and other valveless veins are horizontal and have no need of valves.

The evidence is just as strong from vestigial structures, minute and more or less useless representatives of organs which are well developed and functional in related forms. Drummond calls them "scaffolding" which have been left behind in the process of building by development from a common origin. At some time in the animal's life history they were useful. In human beings certain muscles for moving the scalp and the ears have atrophied, though in some persons they are still active. The vermiform appendix on the large intestine sometimes reminds us very unpleasantly of its presence. Many cases of vestigial structures appear in the embryo and are lost at birth. The unborn child at one stage of its growth shows gill clefts. All these disappear save one which survives as the Eustachian tube. Yet children are sometimes born with a tiny opening in the neck, an inch or more in length, which is the remains of a gill cleft. If man is descended from lower forms there ought to be some explanation for the absence from the human wrist of the os centrale as an independent bone. As a matter of fact it appears in this way in the embryo for a time. This discovery was one of the greatest triumphs the science of Morphology has ever won. The same verification of the evolution theory is exemplified in the discovery of abdominal ribs in the human embryo. There are plenty of examples to be drawn from the animal kingdom. The baleen whale has teeth which never cut the gum. In the embryo of the calf upper incisors appear, but they are later absorbed and replaced by a hard pad which suits the cow's special food. Few people know that whales have vestigial hind legs with bones, cartilages and even unmoving muscles, but the whole pelvic structure is buried far beneath the surface. We think of snakes as limbless, yet the python and his relatives have remains of hind legs which are absolutely useless and so diminutive as to require looking for even on a large specimen.

The comparative anatomist further shows us that new structures

have often been developed by the transformation of the old structures of a very different function. For instance the poison gland of a snake is a specialization of the parotid salivary gland, which in man discharges into the mouth opposite the second upper molar. The mammalian chain of ear bones goes back to structures existing long before there were any mammals.

Palæontology is the science of extinct species of animals and plants. It affords evidence of vast epochs with a succession of animal forms, developing from the simple to the complex, as the theory of evolution would lead us to expect. The fossil records are far from complete; there are many gaps and sudden appearances of new forms, but the fact of a succession of species somehow related is certain, and we have the actual remains of animals that lived ages ago. Nor is it any longer possible to put the advent of man at a late period. The evidence of such explorations as that of Kent's Cavern, Devonshire, England, show that man was the contemporary of the cave-bear and hyena, the mammoth, the saber-tooth tiger, the tichorine rhinoceros, and other extinct animals.

The classical palæontological illustration of evolution is that of the development of the horse. The museums in New Haven and New York have the fossil series most admirably and convincingly arranged, and thus we have direct evidence as to the horse's genealogy. Between the little Eocene hyracothere and the modern horse we can place a series of animals by which we can pass by gradual stages from one to the other. As we come upward there is an increase in stature, in the complexity of the teeth, and in the size of the brain. At the same time, the number of toes decreases from five to one, which shows that the animals were developing more and more speed; for it is a rule that the fewer the toes the faster the animal.[2]

The Palæontologist tells us that the immediate forms from which animals were developed were lizard-like reptiles, and we are further told that the bird is descended from the reptilian stock. Nothing could be in stronger contrast than the form and habitat and manner of life of the average bird and the average reptile. But the zoologist is sure of their evolutionary connection because of certain

[2] The following personal reminiscence in Dr. Micou's lecture notes is of interest. "Huxley in his lectures in New York in 1876 (of which I attended three), claimed that he would demonstrate and prove the Darwinian theory. He spoke clearly and simply but he really proved nothing more than a succession of horse forms beginning with a small animal not much larger than a large fox, with definite changes in the feet. But he did not show that the process of change was due to chance variation. He did not, and could not, prove that the soil was modified in exact correspondence with the new form of foot. Undoubtedly one series, but no 'chance.'"

structural resemblances, their similar embryonic development, and the discovery of certain extinct types which bridge the gap between them. The most important of these "connecting links" is the archæopteryx, the oldest known bird. It was a bird about the size of a crow, and had habits which were probably arboreal. While it is very like a bird in skull, wish-bone and legs, it is in other ways very like a reptile. It has teeth in both jaws, a long lizard-like tail and a strange well developed wing which seems unfinished, for its three digits end in clearly defined claws. It is but the beginner of bird evolution as its wings and legs prove. Nor does it seem to be in the direct line of ancestry of the present bird. It was an offshoot and was developing in its own way, but its strange mixture of reptilian and avian characters, of which the latter predominate, entitle us to consider it very suggestive of the intermediate forms between the reptile and the bird.

The geologist sees in the facts of the distribution of animals strong proof of evolution. It has been mentioned how fruitful were Darwin's observations on this line when he compared the fauna and flora of the Galapagos Islands with those of the mainland. The most striking example of the effect of the separation of land from land before the evolution of life was complete is in Australia. This separation occurred in the Mesozoic times when there were no mammals higher than the marsupials. We find this branch from the common stock evolved into later forms. So there are no higher mammals in Australia, except the bat, to which the sea was no barrier, the rabbit which was introduced by man, and the dingo, the fox-like dog, for which man was probably also responsible. It does not require a St. Patrick to explain the absence of snakes from Ireland.

Le Conte gives what he calls the law of cyclical movement in organic evolution, and his exposition and illustrations of it follow: "The movement of evolution has ever been onward and upward, it is true, but not at uniform rate in the whole, and especially in the parts. On the contrary, it has plainly moved in successive cycles. The tide of evolution rose ever higher and higher, without ebb, but it nevertheless came in successive waves, each higher than the preceding and overborne by the succeeding. These successive cycles are the dynasties or reigns of Agassiz, and the ages of Dana; the reign of mollusks, the reign of fishes, of reptiles, of mammals, and finally of *man*. During the early Palæozoic times (Cambrian and Silurian) there were no vertebrates. But never in the history of the earth were mollusks of greater size, number, and variety of form than then. They were truly the rulers of these early seas. In the absence of competition of still higher animals, they had things all their own way, and therefore grew into a great monopoly of power. In the later Palæozoic (Devonian) fishes were introduced. They increased rapidly

in size, number and variety; and being of higher organization they quickly usurped the empire of the seas, while the molusca dwindled in size and importance, and sought safety in a less conspicuous position. In the Mesozoic times, reptiles, introduced a little earlier, finding congenial conditions and an unoccupied place above, rapidly increased in number, variety, and size, until sea and land seem to have swarmed with them. Never before or since have reptiles existed in such numbers, in such variety of form, or assumed such huge proportions; nor have they ever since been so highly organized as then. They quickly became rulers in every realm of Nature — rulers of the sea, swimming reptiles; rulers of the land, walking reptiles; and rulers of the air, flying reptiles. In the unequal contest, fishes therefore sought safety in subordination. Meanwhile mammals were introduced in the Mesozoic, but small in size, low in type (marsupials), and by no means able to contest the empire with the great reptiles. But in the Cenozoic (Tertiary) the conditions apparently becoming favorable for their development, they rapidly increased in number, size, variety, and grade of organization, and quickly overpowered the great reptiles, which almost immediately sank into the subordinate position in which we now find them, and thus found comparative safety. Finally in the Quaternary, appeared man, contending doubtfully for a while with the great mammals, but soon (in Psychozoic) acquiring mastery through superior intelligence. The huge and dangerous mammals were destroyed and are still being destroyed; the useful animals and plants were preserved and made subservient to his wants; and all things on the face of the earth are being readjusted to the requirements of his rule. In all cases it will be observed that the rulers were such because, by reason of strength, organization, and intelligence, they were fittest to rule. But observe, furthermore: when each ruling class declined in importance, it did not perish, but continued in a subordinate position. Thus, the whole organic kingdom became not only higher and higher in its highest forms, but also more and more complex in its structure and in the interaction of its correlated parts." [3]

While Palæontology does show conclusively the origin of present forms by descent from other forms, it does not show that they arose from one another by imperceptible modifications, as Darwin held. The fact that there are missing parts in the record does not offset this difficulty in the Darwinian theory. Rather the geologic testimony is that species rose suddenly by some genetic process of transformation. The Duke of Argyll shows this clearly: "There are some tracts of time respecting which our records are almost as complete as we could desire. In the Jurassic rocks we have a continuous and undisturbed series of long and tranquil deposits — containing a

[3] *Evolution and its Relation to Religious Thought,* pp. 17–19.

complete record of all the new forms of life which were introduced during these ages of oceanic life. And those ages were, as a fact, long enough to see not only a thick (1,300 feet) mass of deposit, but the first appearance of hundreds of new species. No less than 1,850 new species have been counted — all of them suddenly born — all of them lasting only for a time, and all of them in their turn superseded by still newer forms. There is no sign of mixture, or of confusion, or of infinitesimal or indeterminate variations. These 'Medals of Creation' are each struck by a new die which never failed to impress itself on the plastic materials of this truly creative work. . . . The perfect regularity and beauty of each new pattern of shell, and the fixity of it so long as it existed at all, are features as striking as they are obvious." [4]

Charles A. White writes in similar strain of the rise and decline of the dinosaurs: "Those strangely peculiar animals were introduced suddenly, soon existed in multitudes, became dispersed over the earth with great rapidity and, from their beginning, they were the dominant animals of all the continents. They varied in size from that of a rabbit to that which would be equal to several large elephants; and the grade of organization for the whole subclass was as high in the earlier as in the later part of its existence. They were differentiated into flesh eaters and plant eaters and into denizens of land and water respectively. We know absolutely nothing of the genetic origin of those remarkable animals, and no traces of similar animals have been found in any strata older than those containing their Triassic remains. Their world-wide decadence was not delayed by the improving earth conditions which the mammalia, soon to assume faunal dominion, found abundantly congenial; and the last of their kind perished so utterly at, or immediately after, the close of the Cretaceous period that the earth has since contained no living representative of them." [5] He comments after reviewing similar evidence of flora, birds, fishes, and placental mammals: "If it should ever be possible to trace the evolution of man from the lower animals it will doubtless be found that it has been accomplished, not by the slow process of natural selection, but by a series of sudden mutations." [6]

Thus palæontology shows descent by sudden, not imperceptible, modifications, and seems to show definiteness and purpose in the lines of development.

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[4] *Organic Evolution Cross-Examined*, pp. 146, 7.

[5] *The Relation of Phylogenesis to Historical Geology, Science*, Vol. XXII, p. 109.

[6] *Ibid.*, p. 111. See also his article on *The Mutation Theory of Prof. De Vries*, Smithsonian Institution Report, 1901, pp. 631 ff.

Theistic writers on evolution do not contend with materialistic writers regarding the *facts* of organic development, but regarding their interpretation of the facts. The universe has two sides, the physical, which is visible, and the spiritual, which is hid from the senses. Evolution is a description of the process, but description is not explanation. Explanation takes us into the invisible side of the universe. On the visible side we see the process of evolution, the development of one form out of another until species arise. On the invisible side we perceive definite progression, which we realize takes place according to law. The action of God guides and directs the whole process, or in St. Augustine's pregnant phrase, the universe is a " continuous creation." The variations are teleological, determined from within by a definite law of growth, as most modern evolutionists hold. Evolution should definitely suggest purpose, for it implies that the evolving form holds in itself the possibility of a prearranged series. What is the seed but the casket of determined future events?

Theistic Evolution looks on the whole process as the continuous creation of successive animal forms by definite modifications through immanent directive forces, which work in harmony with the environment and gradually embody the type of the species in final form.

This view has been held by competent evolutionists from the first. Wallace, the co-discoverer with Darwin of the principle of organic evolution, considered it consistent with theism. He believed that the controlling action of a higher intelligence lies back of the secondary action of the environment, and that the laws which govern the physical world are utterly insufficient for the formation of man's mental and moral being. Other early evolutionists who held that variations were on definite lines were Dana, Gray, Lyell, Mivart, Owen, von Baer, Kölliker, Nägeli, the Duke of Argyll and most French naturalists. Owen held that organisms are evolved in orderly succession, stage after stage, towards a foreseen goal, and the broad features of the course show the unmistakable impress of Divine volition. He called his theory of the origin of

species "derivation," and wrote in 1868, "Derivation holds that every species changes in time, by virtue of inherent tendencies thereto. Derivation sees among the effects of the innate tendency to change, irrespective of altered circumstances, a manifestation of creative power in the variety and beauty of the results."[7] Le Conte held that evolution is by virtue of inherent forces determining the development on definite lines. Many other American evolutionists hold this view of immanent formative forces controlling variation.

Not only do teleological variations appear, but it is extremely difficult to find haphazard variations anywhere. There are three analogous cases of fixed and progressive inner development, independent of the environment, which support the theory of immanent forces. These are (1) Crystallization, mechanical force acting on mathematical lines; (2) Mitosis, the structural propagation of the cell through division; and (3) Embryological growth along unvarying lines in each species.

1. Crystallization is the result of a purely physical force which differs widely from life force, but there is this point of comparison between the crystal and the organism, that each results from an inner formative force which determines growth. The same innateness holds of both, and there is no chance variation. The analogy is, therefore, to that extent legitimate. Every mineral that is not amorphous has its own law of crystallization, which describes the action of the inherent force. When matter is free from external influences so as to be able to crystallize, the peculiarities of internal structure are expressed in the external form of the mass, and there results a solid body bounded by plane surfaces intersecting in straight edges, the directions of which bear an intimate relation to the internal structure, or if the crystallization takes place in a confined space about several centers, the development of the plane surfaces may be prevented and an aggregate of differently orientated crystal individuals results. The scientist produces crystals at will in his laboratory, but the best and largest occur in nature where they have formed through long periods of time.

[7] *Anatomy of Vertebrates,* Vol. III, p. 808.

Du Bois-Reymond used this analogy in an address before the Berlin Assembly in 1876: "One of the greatest difficulties," he says, "presents itself in physiology in the so-called regenerative power, and — what is allied to it — the natural power of healing; this may now be seen in the healing of wounds, in the delimitation and compensation of morbid processes, or, at the farthest end of the series, in the re-formation of an entire fresh-water polyp out of one of the two halves into which it had been divided. This artifice could surely not have been learnt by natural selection, and here it appears impossible to avoid the assumption of formative laws acting for a purpose. They do not become more intelligible by the fact that the regeneration of mutilated crystals, observed by Pasteur and others, points to similar processes in inanimate nature." [8] We are strongly reminded of crystallization when we study foraminiferous shells. Here we have an innate law determining the different markings, without any change of the environment. Herbert Spencer recognizes a power of this kind in speaking of the reproduction by budding of a begonia leaf. "We have therefore no alternative but to say, that the living particles composing one of these fragments, have an innate tendency to arrange themselves into the shape of the organism to which they belong." [9]

2. In the orderly propagation of the cell we see the inner directive force in full control. The process never varies whether the cell is an organism living its own free life, or whether it is part of a larger number merely taking its share in the life of the complex organism. A description of the cell and its life history is given in a note in the Appendix, and its properties are discussed in another chapter.[10] Wilson tells us that "there is at present no biological question of greater moment than the means by which the individual cell-activities are co-ordinated, and the organic unity of the body maintained." [11] It would be hard to find a more marvelous in-

[8] *Reden*, Vol. I, p. 211.
[9] *Principles of Biology*, Vol. I, § 65.
[10] See Note J. and Chap. XII.
[11] *The Cell in Development and Inheritance*, p. 41.

stance of development controlled by immanent directive forces than is shown by the cell. Many American evolutionists emphasize this inner growth as independent of changes in the environment. Comparative embryology shows that the organism dominates cell formation, using for the purpose one or many cells, massing its material and directing its movements as if the cell existed only in subordination to its will. Whitman, for instance, says: "That organization precedes cell formation and regulates it, rather than the reverse, is a conclusion that forces itself upon us from many sides. . . . The organization of the egg is carried forward to the adult as an unbroken physiological unity, or individuality, through all modifications and transformations." [12]

3. In the last paragraph we have already passed into the third of our analogies of the action of immanent life forces, namely, the analogy from embryology. Huxley thus describes the development of the embryo of a salamander:

"The student of Nature wonders the more and is astonished the less, the more conversant he becomes with her operations; but of all the perennial miracles she offers to his inspection, perhaps the most worthy of admiration is the development of a plant or of an animal from its embryo. Examine the recently laid egg of some common animal, such as a salamander or a newt. It is a minute spheroid in which the best microscope will reveal nothing but a structureless sac, enclosing a glairy fluid, holding granules in suspension. But strange possibilities lie dormant in that semi-fluid globule. Let a moderate supply of warmth reach its watery cradle, and the plastic matter undergoes changes so rapid and yet so steady and purposelike in their succession, that one can only compare them to those operated by a skilled modeler upon a formless lump of clay. As with an invisible trowel, the mass is divided and subdivided into smaller and smaller portions, until it is reduced to an aggregation of granules not too large to build withal the finest fabrics of the nascent organism. And, then, it is as if a delicate finger traced out the line to be occupied by the spinal

[12] *Journal of Morphology,* Vol. VIII, pp. 649, 657.

column, and moulded the contour of the body; pinching up the head at one end, the tail at the other, and fashioning flank and limb into due salamandrine proportions, in so artistic a way, that, after watching the process hour by hour, one is almost involuntarily possessed by the notion, that some more subtle aid to vision than an achromatic, would show the hidden artist, with his plan before him, striving with skillful manipulation to perfect his work." [13]

But embryology seems to furnish more than mere analogy. It has long been supposed to offer direct evidence of evolution, in that the embryo appears to pass through successive forms resembling lower species. As early as 1811, Meckel, an embryologist, wrote: "There is no good physiologist who has not been struck by the observation that the original form of all organisms is one and the same, and that out of this one form, all, the lowest as well as the highest, are developed in such a manner that the latter pass through the permanent forms of the former as transitory stages." [14] He tells us he is not the first to observe this. Among the Greeks, Aristotle commented on it. In speaking of embryology it must be remembered that larvæ are embryonic forms developing in the womb of nature. Usually they pass through a decided metamorphosis before they reach adult life, and they are always unable to propagate their kind.

Von Baer established Meckel's principle more fully and the "recapitulation theory," as it is called, is known by his name. He made clear what has always been suggestive of evolution, the remarkable resemblance between the embryos of different types of the same group. In the embryo we see, as it were, the evolutionary process condensed. Or as Haeckel puts it in what he considers the "fundamental biogenetic law," ontogeny (the development of the individual) is a shortened recapitulation of phylogeny (the evolution of the race). Milnes Marshall observes epigrammatically that the individual climbs up its own genealogical tree. Of course such statements can only be

[13] *Lay Sermons*, pp. 260, 1.
[14] Quoted by Huxley, *Evolution, Enc. Brit.*, 9th edit., Vol. VIII, p. 750.

taken in a general way, but one of the most recent works on evolution states the case strongly: "There is no doubt that in many cases the developing embryo pursues a strangely circuitous path instead of progressing straight towards its goal, and the only light that we can throw on many instances of this circuitousness — when it is not adaptive to the peculiar conditions of development — is the light from the past. The living hand of the past is upon the embryo, constraining it to follow the old route of its race, and often reasserting its power in trivial details, even when a considerable short cut has been made." [15]

The frog is an example of this embryonic repetition of presumed racial evolution. It lays its eggs on the surface of the water and from them tadpoles emerge in due time, which like fishes have gills and breathe their oxygen from the water. Their nearest neighbor is the eft. That the tadpole is not a true fish is shown in its inability to produce its kind. The inner development continues for a time until lungs are formed. Meanwhile legs have been growing and the tail is lost. Then the tiny creature, jumping on the land, becomes a frog, an air-breathing animal. Thus in the frog life an orderly evolution is accomplished before our eyes, and we see changes in a few weeks which seem an epitome of a development lasting long periods of years. There is no chance in the process, nor any change in the environment. The whole vast transformation takes place from within.

As another illustration consider the pleuronectidæ, a family of fishes including the flounders, the halibut, the sole, etc. They rest and swim on one side, with their eyes on top, as their manner of swimming seems to require. However, as embryos these fish have their eyes on either side of the body in normal position. Their body is then symmetrical and they live near the surface. But at a certain point in development the body loses its symmetry, a change of equilibrium sets in and they begin to sink to the bottom where they afterwards live. Meanwhile the eye on what is to be the lower side travels round the head, or even in part through it, until both eyes are on the upper surface of the body. All this seems to point quite plainly to the fact that the ancestors of

[15] Geddes and Thomson, *Evolution*, p. 49.

these fish were symmetrical and had different habits of life. One more illustration will be sufficient. "A fish has a two-chambered heart, with an auricle that receives impure blood from the body and a ventricle that drives it to the gills. In amphibians the auricle is divided lengthwise by a partition, so that the heart becomes three-chambered. In reptiles the ventricle is partially divided by a similar partition, and this becomes complete in the case of the crocodile. In birds and mammals the heart of the adult is four-chambered, with two auricles and two ventricles. But when we inquire into the development of the heart of the bird or of the mammal, we find a series of stages which are in a general way parallel to the historical evolution of the heart as we see it registered in the successive grades — fish, amphibian and reptile. The same impression is to be gained from a study of the development of the brain, the skull, the kidneys, and other organs. It seems to us impossible to deny that there is in the stages of organogenesis (the development of organs) some sort of repetition of the stages in the evolution of organs. The embryo of a higher vertebrate has still in some measure to recapitulate the steps taken by the developing of a lower vertebrate; and though we may say that this is an architectural necessity, that the end could be reached in no other way, the facts seem to press us to go further and say that something in the inheritance, which is due to literal blood-relationship, compels the repetition." [16]

Yet discretion is necessary in using this argument from embryology. The ancestors of all living animals are dead, and the fossil remains are too imperfect to be of much use. The resemblance is only between embryonic stages, not between the adult of a lower series and the embryo of a higher. The recapitulation is general and not exact, and is seen more in the stages of the development of organs than in the development of the organism as a whole. The organism has its own individuality from the start, and never at any point is anything else than its nature permits.

An interesting suggestion arises from this recapitulation theory, that the whole process of evolution may be embryological, and each species a continuous line of life, the successive forms being transient, *larval* stages in the predetermined growth. On this view each true species forms, as it were, an individual organism, whose life is measured by ages, and it passes through successive forms, corresponding to the larvæ of a frog or butterfly, save that these forms propagate themselves, decided changes taking place at certain stages through the inner

[16] Geddes and Thomson, *Evolution,* pp. 51, 2.

genetic force, in relation to the environment but not determined by it.

This view is a far cry from Darwinism, yet one great school of evolutionists is today insisting on it. Many men with their own special theories make up this school, but in general the following is a summary of their position. To them variation seems to have taken place by leaps and bounds, with relatively sudden transformations of the functional and structural equilibrium on a large scale. In regard to these transformations the rule of the struggle for existence must be merely subsidiary. This saltatory kind of evolution-process is neatly called "kaleidoscopic variation," because as the pictures in a kaleidoscope change not gradually but by a sudden leap to an essentially new pattern, so also do the forms of life. Such variation includes a belief in the close connectedness of every part with the whole, and in the strict correlation of all parts, so that variation in one part is always simultaneously associated with variation in many other parts, all being comprised in the "whole," which is above and before all parts and determines them. Variation seems predetermined and in a definite direction — an "orthogenesis" in fact, which is inherent in the organism, and which is indifferent to utility or disadvantage, or natural selection, or anything else, but simply follows its prescribed path in obedience to innate law. Finally, there is a belief in the activity and spontaneous power of adaptation and transformation in the organism, and in the relative freedom of all things living, which leads to a new study of the mysterious controlling force in evolution — the secret of life itself.[17]

It remains now to examine the evidence for this theory, and to note the authorities who support it. It depends on what have been called discontinuous variations, or mutations, rather than on fluctuating or ordinary variations. Few men are better qualified to speak of this than Professor Bateson, who says: "So far a presumption is created that the Discontinuity of which Species is an expression has its origin, not in the environment, nor in any phenomenon of adaptation, but in the

[17] Condensed from Otto's *Naturalism and Religion*, pp. 143–145.

intrinsic nature of organisms themselves, manifested in the original Discontinuity of Variation. But this evidence serves a double purpose. . . . The existence of sudden and discontinuous Variation, the existence, that is to say, of new forms having from their first beginning more or less of the kind of *perfection* that we associate with normality, is a fact that disposes, once and for all, of the attempt to interpret all perfection and definiteness of form as the work of Selection. The study of Variation leads us into the presence of whole classes of phenomena that are plainly incapable of such interpretation. . . . It suggests in brief *that the Discontinuity of Species results from the Discontinuity of Variation.* This suggestion is in a word the one clear and positive indication borne on the face of the facts." [18]

Darwin opposed the origin of species from strongly marked variations, which he called "sports," on the ground that they would be swamped by cross breeding. But since his day a mass of observed facts has been growing to show that these are the very variations which are most stable and able to establish themselves. "De Vries brings forward, from his years of experiment and horticultural observation, comprehensive evidence of the mutational origin of new species from old ones by leaps, and this not in long-past geological times, but in the course of a human life and before our very eyes." [19] The record of the fossils is equally conclusive. This theory of an ordained development along definite lines in which at certain points sudden changes, or leaps, take place, explains some of the gaps in the ladder of descent. It is not that certain intermediate forms are missing because they were not preserved, but that the animal never passed through those forms at all. Von Baer held that many of the gaps may be due to the animal having made leaps at such points. He never accepted the monistic view that the whole series is a unit. Milnes Marshall tells us that there are many cases of abrupt metamorphosis or transitions which instead of being gradual are sudden. Nor

[18] *Materials for the Study of Variation*, p. 567.
[19] Otto, *Naturalism and Religion*, p. 173.

are these small jumps, but bounds forward of startling magnitude such as is seen in the sluggish caterpillar's change into a dainty butterfly.[20] Huxley said that Darwin hampered himself by his axiom, *Natura non saltus fecit,* for there is every reason to think that she does sometimes make very considerable leaps. George Darwin departs from his father's views. "These considerations lead me to express a doubt whether biologists have been correct in looking for continuous transformation of species. Judging by analogy we should rather expect to find slight continuous changes occurring during a long period of time, followed by a somewhat sudden transformation into a new species, or by rapid extinction."[21] Quotations could be multiplied, but a short list of names of those who hold the theory of discontinuous variation or heterogenesis (the production of forms unlike the parents) may suffice to show how well supported it is. From Darwin's time on it has been held by Bateson, von Baer, Dall, George Darwin, Cope, Dawson, Delage, Eimer, Emery, Galton, Huxley, Hyatt, von Kölliker, Korschinsky, Le Conte, Marshall, Morgan, and Scott.

Closely bound up with the question of variation is that of heredity, for if the decided variations are not inheritable they are manifestly of no use. As Professor Pearson observes, "variation and inheritance rather precede than follow evolution; they are at present *one* fundamental mystery of the vital unit."[22] In what has been said above about variation, inheritance has been taken for granted, but it is well to examine briefly the various theories of today. Darwin believed in the inheritance of acquired characteristics, but in this his great champion Weismann contradicts him, and so modifies Darwin's view that it is a wonder he can still claim to be a Darwinian. His theory cannot be more fully dealt with here than to say that he believes that each one of the physical characters of an organism, even down to hair, skin spots, etc., is represented by a tiny particle in groups of particles which make up

[20] *Nature,* Sept. 11, 1890.

[21] Address at Capetown, 1905, to British Association for the Advancement of Science.

[22] *Grammar of Science,* p. 502.

each chromatin grain in the nucleus of the germ cell. When the parental nuclei coalesce there is a struggle between these "determinants," and the new organism develops according to the result of the struggle. When the embryo starts growing a certain group of cells is set aside to form the germ cells of the future. The rest are soma or body cells. No later changes in the soma cells by use or disuse or the action of the environment are inheritable. It is those characteristics which are the result of the congenital variation on which natural selection operates in the struggle for existence. Weismann insists upon the germinal origin of variations which are heritable, but concedes that germinal variation may be given a particular direction by the environment. These variations may be at first too slight to have selectional value, but by the persistent action of the environment will be increased until selectional value is attained. Further they will make their appearance not in an occasional individual merely, as we should expect if they are due to chance, but in so much of the race as is subjected to the continuous action of the same environment. In taking this position he attaches much less importance to natural selection than a faithful Darwinian should do. Weismann's two great contributions are the continuity of the germ plasm and the non-inheritance of acquired characteristics. Otherwise his theory seems too fine spun ever to be verified by observation.

In strong opposition to Weismann stand the Neo-Lamarckians who bring up to date the views advocated in 1809 by Lamarck and in 1830 by St. Hilaire. They reject the slow natural selection of the best among chance variations in which the organism is practically passive, in favor of the exertion of the organism to adjust itself to the environment through the use and exercise of its various bodily organs and through the increased efficiency of its physical and mental functions. What one generation achieves as a result of its efforts in the way of differentiation of structure, and in capacities and habits it passes on to the next. In due time cumulative inheritance yields fixed specific characters. Hand in hand with the physical changes has gone mental modification. The habits con-

nected with increased and more efficient use of an organ or function have been transmitted by inheritance. Instinct is inherited habit that has become fixed. The Neo-Lamarckian theory also calls for the reverse effect of the disuse of an organ. Non-use leads to degeneration and brings about a change in the characteristics of an organ. The environment directly affects the organism by requiring the production of new activities and groupings, and changes of form, and even of new organs. The chief modern supporters of this view are Eimer, Kassowitz, Haacke, Spencer, Packard, Osborn, Cope, Hyatt, Ryder and Brooks.

The decision between the views of Weismann and other Neo-Darwinians and the Neo-Lamarckians, between the non-inheritance and the inheritance of acquired characteristics, or a co-ordination of these views, must rest with those who are studying the problem by actual experiment and by the tabulation and comparison of results. There are two groups studying the problem from its two sides, the biometricians, who are measuring and tabulating variations, and the Mendelians, who are experimenting with inheritance by cross breeding.

The great names of the former school are Francis Galton and Karl Pearson. The habit of biologists has been to use the terms variation, selection, elimination, correlation, etc., vaguely, but these new workers ask for exactness of statement as to how much an organism varies, as to how many are selected and eliminated, as to how much the correlations are, and so forth. Enough has been done to yield some interesting results. It has been shown that organisms tend to vary to a degree that most biologists had not suspected, but that the normal variations are grouped around a certain mean in such regularity that they can be represented by a geometrical curve. If the registration of similar material be kept up for years and there is a consistent increase in asymmetry of the curve or tendency to skew out of the first position, it must mean that the species is moving in a definite direction as regards the particular character measured. Similarly if the curve becomes pronouncedly double-humped, it is a sign that the species is dividing into two species. Further, biometrics shows that variation in any one character causes a correlated variation in other parts as well. Thus the organism often changes as a unit in many parts at once. Lastly evidence is slowly accumulating to show that organic structure may pass abruptly from one position of equilibrium to another. So

biometrics is supporting the mutational theory of the origin of species by sudden leaps or discontinuous variations. Francis Galton compared organic structure to a polygonal slab so constructed as to be able to stand on any one of its sides. "The model and the organic structure have the cardinal fact in common, that if either is disturbed without transgressing the range of its stability, it will tend to reestablish itself, but if the range is overpassed it will topple over into a new position; also that both of them are more likely to topple over towards the position of primary stability, than away from it." [23]

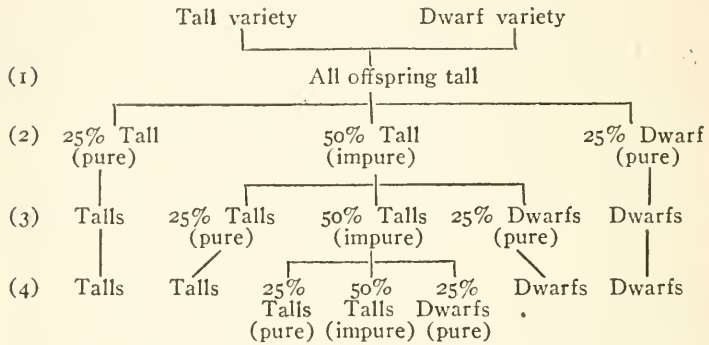
The other great school of experimentalists is called Mendelian, after the Austrian monk, Gregor Johann Mendel, who in 1865 published a report on the experiments in pedigree culture of peas and other plants in the garden of his cloister. His work passed unnoticed at the time, but in 1900 his conclusions were reached independently and almost simultaneously by De Vries in Holland, Correns in Germany, and Tschermak in Austria. This led to a rediscovery of Mendel's paper, and due credit was given the departed naturalist. His name will undoubtedly live forever in the annals of biological science, for his observations, experiments, and conclusions on inheritance have taken their place as matters of fundamental importance in the study of heredity. In addition to the names given above Bateson, Castle, and Cuenot should be mentioned as prominent in this connection. Mendel's own experiment may be taken as the example to illustrate the law he established. He crossed a giant variety of the edible pea with a dwarf variety, and the offspring were all tall. Evidently the character of tallness was more powerful than shortness, and Mendel called it the "dominant"; and shortness the "recessive" character. This first generation was allowed to self-fertilize, and the second generation had talls and dwarfs on the average proportion of 3:1. The dwarfs of this generation never thereafter produced anything but dwarfs on self-fertilization, while fifty per cent of the talls in the future always produced talls. But the remaining talls were "impure," for the third generation yielded talls and dwarfs on the proportion of 3:1. When this generation produced another the same law held good. Part were pure recessives, part were pure dominants, and the remainder yielded talls and dwarfs in the regular proportion.

Professor Punnett, who is a Mendelian investigator himself, states the law thus: "Wherever there occurs a pair of differentiating characters, of which one is dominant to the other, three possibilities exist: there are recessives which always breed true to the recessive character: there are dominants which breed true to the dominant character, and are therefore pure: and thirdly, there are dominants which may be called impure, and which, on self-fertilization (or inbreeding, where

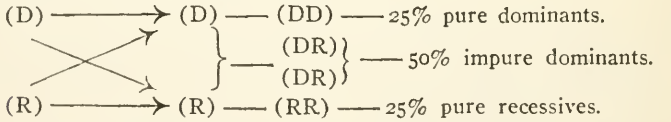
[23] *Natural Inheritance*, p. 27.

the sexes are separate) give both dominant and recessive forms in the fixed proportion of three of the former to one of the latter." [24]

The law can be represented by a diagram thus:



These results have been proved many times in a great variety of animals and plants with characteristics varying from horns in cattle to the markings on leaves of plants. The theory is built upon the supposition that the germ cells carry these characters along with others in the particles of which they are made up. To go back to the figure given above, it is supposed that the first generation yields generative cells or gametes which bear only one or the other of the contrasted or alternative characters, not both. If the fertilization of these gametes be fortuitous, cells with the dominant characteristic will conjugate with others exactly similar and yield 25% of pure dominants, and the same will be the case with cells having only the recessive character yielding 25% of pure recessives, but the remaining cells will mingle dominant with recessive characters and yield 50% of impure dominants. The following scheme will make it clear.



It must be noted that there are characters which blend on crossing, *e.g.*, mulattoes in whom color is blended, as well as these Mendelian characters which stay separate, and the task before the Mendelians is to study the two, and discover what is the criterion of blending and alternating respectively. But this great fact the school has established, that if a strong new character appears, it is not necessarily lost in future breeding; it cannot be "swamped," as Darwin feared.

[24] *Mendelism*, p. 11.

Thus a sound reason is given for the origin of species by discontinuous variations or mutations, and for the progress of evolution by occasional leaps rather than by small degrees.

Evidence is accumulating to show that species rise in two ways, by the accumulation of fluctuations, as the biometricians claim, or suddenly by mutation, as both the biometricians and the Mendelians prove.

The environment is not the great factor in evolution that it was once supposed to be. According to Darwin the environment changed *pari passu* with the variations, but his critics have attacked this theory from the start. When the environment changes it does so slowly, and the diverse conditions fade into one another insensibly, whereas the evolving species, supposedly dependent on its surroundings, forms rather a discontinuous series, for, as we have seen, the new species often appear with decided variations without transitional forms. The significance of this fact is immense. The temperature, depth, salinity, etc., of the ocean are nearly stable, and have been for ages, and the gradations are gradual and continuous, yet fishes differ widely. Often species which belong to the same family and live under identical conditions vary greatly. In the fossils we find that of the crustacea, one of the oldest forms of life, some have eyes and some have not. Deep sea dredging reveals the same curious difference in living specimens from the sea bottom. After millions of years some have developed eyes while others remained blind, although the environment was the same for both. Even decided changes in environment do not always produce modifications to fit the animal to his new surroundings. It used to be said that the blindness of fish in Mammoth Cave was due to disuse of the eyes in the darkness, yet reptiles and rats under the same conditions have fully developed eyes. Upland geese have the webbed feet of ducks though they never swim. The water hen, on the other hand, lives habitually in the water, but it has not developed webbed feet; neither has the water ousel, though it gets its food by diving. Darwin tells us that many beetles in the Madeira Islands are practically wingless, because winds blew out to sea those able to fly, yet he

admits that in the same islands are other beetles which have strong wings. Forms which we might consider unfit to survive do exist and thrive. But it would be a great mistake to consider the environment as without effect, for an unfavorable one will destroy forms rapidly. The problem really depends on how much adaptation the individual organism can make to any change. While it is important to remember that the fundamental characteristic of a living organism is its power of response to surroundings, it must not be forgotten that the organism also varies while the environment remains the same. The tendency today is to deprive the environment of most of the credit it used to have as a factor in evolution.

If evolution were limited to the variation of a single organ or function, environment might be responsible for more than it evidently is. But one organ cannot vary without affecting others. The whole is knit together in too great complexity for the organism to act other than as a unit. Thus since variation is a problem of correlation, it is the more likely to have been caused by inner directive life forces than by any external factors. Herbert Spencer gives some striking illustrations of the greatness of correlation.[25] The anatomical variations by which an animal accustomed to regular movement over smooth ground is transformed into one adapted to the work of leaping over rough surfaces is not confined to changes in a single organ, but involves coordinate changes in almost every part of the system. The ability to leap like a kangaroo involves a striking development not only in the length and strength of the bones of the hind limbs, but in the articulation of the joints, and in the development of the muscles. A change must take place not only in one bone and one set of muscles, but in all the bones of the hinder extremities simultaneously. Not only must the long bones and their coordinate muscles by which the bones are suddenly lengthened for a leap be properly modified, but the bones of the toes which sustain the reaction of the leap and their coordinate muscles must be correspondingly modified.

[25] *Principles of Biology*, §§ 69, 155, 166.

Otherwise there will be no fulcrum for the increased exertion to act upon. Thus without counting the changes which would be required in the pelvis as well as in the nerves and blood vessels, there are, counting bones, muscles, tendons, and ligaments, at least fifty different parts in each hind leg which have to be enlarged. Moreover, they have to be enlarged in unlike degrees. The muscles and tendons of the outer toes, for example, need not be added to so much as those of the median toes.

Professor Roux of Switzerland insists that the changes in structure must have an inner cause. It is impossible that the innumerable adaptations carried out into the finest detail, which accompany variations, should all have been of immediate use to the special variety and hence preserved by natural selection. Are we seriously asked to believe, is his inquiry, that a slight alteration in the direction of the fibers of one of the tendons, or the angle which a small artery makes with the larger one it springs from, would determine the survival of an individual?

Evolution, then, according to most modern ideas proceeds steadily by accumulation of variations or by great leaps at intervals, while the environment plays only a secondary part. It remains to be seen whether it is an orderly development, or merely a matter of chance. The answer to this question brings us into ground where many theories are being formed. Darwin's natural selection has been proved inadequate as a species-forming factor, but in its place no one theory has as yet won recognition. The scientific world must wait until more observation and experimentation has taken place. There is no question, however, that the trend of opinion is away from any idea of haphazard evolution to the conception of development along definite lines. This conception is necessary if we are to explain the fluctuating variation which seems to persist in one direction, until new useful organs arise, or if we are to account for the steady development along lines plainly disadvantageous. After a time variations that had resulted in the rapid development of a species along a particular line cease, leaving the newly formed species fixed, unless another period of

marked variation were to appear. This alone explains the striking fact of the survival to our own day of many primitive forms, unchanged amid a changed environment. Finally, the need of a theory of rapid development on fixed lines is necessary to bring the evolution of the organic world within the time during which life has existed on the earth. The physicists have ruthlessly cut down the infinite length of time the earliest evolutionists complacently assumed they had at their disposal. As De Vries states the present position in this regard: "The deductions made by Lord Kelvin and others from the central heat of the earth, from the rate of the production of the calcareous deposits, from the increase of the amount of salt in the water of the seas, and from various other sources, indicate an age for the inhabitable surface of the earth of some millions of years only. The most probable estimates lie between twenty and forty millions of years. The evolutionists of the gradual line, however, have supposed many thousands of millions of years to be the smallest amount that would account for the whole range of evolution, from the very beginning until the appearance of mankind. This large discrepancy has always been a source of doubt and a weapon in the hands of opponents of the evolutionary idea. The theory of descent had to be remoulded." [26]

The name orthogenesis is given to this theory of determinate variation and evolutionary progress along fixed lines. It may be urged that Natural Selection gives progress along definite lines, but for this the name orthoselection has been coined. The two views differ radically. In orthoselection definite lines of progress are fixed by eradication. Variation may be wholly fortuitous, but selection permits only certain kinds of variation to persist and accumulate. On the other hand, in orthogenesis the variations themselves, and hence the lines of modification, are predetermined. There are two main theories of orthogenesis, representing two radically different points of view. The men who offer them are Eimer and Nägeli. The former considers that orthogenesis is produced and controlled by the external factors of environment working directly on the organism, while the latter holds that orthogenesis is the result of a somewhat mystical inner life-force.

[26] *The Evidence of Evolution. Science.* Vol. XX, pp. 395–401.

Eimer, following the example of the great Darwin, did not propound his theory until after long years of specific observation and study of the facts concerning certain lizards and birds, and especially the wing-patterns of two large groups of butterflies. He finds that the lines of evolution, or modification of organisms, occur according to control along a few definite directions. It is the result of the inheritance of acquired characters which determines these lines of change, and the acquiring of new characters depends on the effects of external influences, climate, nutrition, etc., and on the given constitution of the organism. But though stimulated and caused by the environment, variation and evolution only occur according to the laws of organic growth which differ with each organism. A few general lines of evolution result, from which occasional branches are given off, like the familiar genealogical evolution tree. Geographical isolation helps greatly, and in this case some efficacy might be attributed to natural selection. But the actual forming of species, he finds, depends on three chief factors; one, a standing still or cessation of development, another, a sudden development by leaps (with which compare the later heterogenesis theory of De Vries treated above), and third, a hindrance or difficulty in reproduction (which is the essential factor in the theory of physiological selection which Romanes later proposed). Of the three species forming factors he attributes most value to the first. Certain forms stand still at definite stages in the development line, while others go on. They are dropped out as it were, and do not develop further. Thus we can have in the same region a series of distinct forms, all related chainwise though living simultaneously. But Eimer will not recognize the "dominant inner factor ever pushing toward advance," as he characterizes Nägeli's view, because of the numerous recessive structures he sees. He writes: "This tendency to progress based on the assumption of 'inner growth laws' contradicts flatly the assumption of outer influences as causes of change. . . . And it is my belief that it is precisely these outer influences, and the physiological phenomena dependent on them, which are the determining factors in the phyletic (race) development just as they are in individual development." [27] Eimer has many followers, though they do not accept his theory in all its details. The most important are W. Haacke, Reinke, R. Hertwig, O. Hertwig, Wiesner, Hamann, Dreyer, Wolff, Goette, Kassowitz, V. Wettstein, and Korschinsky.

Before taking up Nägeli's theory let us note that many of the recognized American palæontologists, such as Osborn, Williston, Hyatt, Smith, and Cope, along with Whitman, the Nestor of American zoologists, all say they find evidence for orthogenetic variation and descent.[28]

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[27] Quoted by Kellogg, *Darwinism To-day*, p. 285. [28] *Ibid.*, p. 288.

Of these Cope has most definitely worked out a theory, which we may note in passing. The course of evolution seems to him to imply the existence of an originative, conscious, and directive force. He recognizes three orthogenetic factors, a growth force, which he calls "bathmism," the direct effect of use and disuse of the environment, and the influence of primitive consciousness. This last is most unique. He claims that "conscious states have preceded organisms in time and evolution." "Energy become automatic is no longer conscious, or is about to become unconscious."

Nägeli holds with Weismann to the immortality of the germ plasm, or "ideo-plasm" as he calls it. In this he finds the continuity necessary for the working out of his vitalistic laws for development. He writes: "Since ideo-plasm alone is transmitted from one individual life to the next following, the race development consists solely in the continual progress of the ideo-plasm, and the whole genealogical tree from the primordial drop of plasma up to the organism of the present day (plant or animal) is, strictly speaking, nothing else than an individual consisting of ideo-plasm, which at each ontogeny forms a new individual body, corresponding to its advance."[29] The ideo-plasm of any one generation is not exactly identical with that of either its progenitors or its progeny, it is always increasing in complexity with the result that each successive generation marks an advance upon its predecessor. But unlike Weismann, Nägeli does not confine his germ cells in one place out of all relation to the body cells, but spreads them throughout the body in a sort of network of primitive protoplasm. The ideo-plasm is formed at first in scattered bits in the rest of the protoplasmic mass, but as these bits increase they join and become united in a network surrounded by and containing in its meshes the body plasm. This ramifying, stimulus-carrying network contains the essential life properties, and gives rise to life with all its variety and complexity. His theory of orthogenesis depends on the assumption of "a principle of progressive development, a something inherent in the organic world which makes each organism in itself a force or factor making towards specialization and adaptation, that is towards progressive evolution. . . . Nägeli believes that animals and plants would have developed about as they have even had no struggle for existence taken place, and the climatic and geological conditions and changes been quite different from what they actually have been." Other writers call this factor "inner directive force," "inner law of development," "intrinsic tendency towards progress," etc., which is to say that organic evolution has been and is now ruled by unknown inner forces inherent in organisms,

[29] *Summary of Theory of Organic Evolution*, § 16.

and has been independent of the influence of the outer world. The lines of evolution on this view are immanent, unchangeable, and ever slowly stretch towards some teleological goal.[30]

The belief in some sort of mysterious life force and spontaneous activity in organisms is the characteristic of most recent anti-Darwinian views. In the able hands of the modern French philosopher, Bergson, who brings to his philosophy a wealth of scientific information, this life force is the secret of the whole problem of evolution. The great super-physical supply of vitality pours itself out in various forms, each accumulating ever fuller volume of free creative activity. But they have no goal other than their own self-augmentation, for teleology is excluded from his system, and the forces, while they press the forms of life forward in unvarying lines, are blind and unguided. He looks upon the universe as having a creation consciousness behind it that is ever struggling with matter in an evolutionary process. Thus life with its durational and temporal conditions is "voluntary," and as life evolves in its struggle with matter, it becomes so more and more distinctly. No less brilliant in his exposition and illustration, is Driesch, a great biologist, in his writings on the life force, or vitalism. He differs radically from Bergson in this question of purpose. He is, of all modern investigators, perhaps the one who has most persistently and thoroughly worked out the problem of causal and teleological interpretation. The teleological seems to him itself a factor playing a part in the chain of causes. The keynote of all is to him the entelechy of Aristotle.

So much for the scientific side of evolution. How then may the theist view the process? Professor Otto after a careful review of post-Darwinian theories concludes: "All this implies an admission of evolution and of descent, but a setting aside of Darwinianism proper as an unsuccessful hypothesis, and a positive recognition of an endeavor after an aim, internal causes, and teleology in nature, as against fortuitous and superficial factors. This opens up a vista into the background of things,

[30] See Kellogg, *Darwinism To-day*, pp. 277, 8.

and thereby yields to the religious conception all that a study of nature can yield — namely, an acknowledgment of the possibility and the legitimacy of interpretating the world in a religious sense, and assistance in so doing. . . . A world which in its evolution is not exposed, for good or ill, to the action of chance factors — playing with it and forcing it hither and thither — but which, exposed indeed to the most diverse conditions of existence and their influences, and harmonizing with them, nevertheless carries implicitly and infallibly within itself the laws of its own expression, and especially the necessity to develop upward into higher and higher forms, is expressly suited for teleological consideration, and we can understand how it is that the old physico-teleological evidences of the existence of God are beginning to hold up their heads again. They are wrong when they try to demonstrate God, but quite right when they simply seek to show that nature does not contradict — in fact that it allows room and validity to — belief in the Highest Wisdom as the cause and guide of all things natural." [31]

When the majority of the naturalists are coming to see in evolution a definitely controlled movement within regular lines, what right have they to prohibit the theistic thinker to see the immanent, indwelling control of Divine Energy guiding all to a predetermined goal? Needless to say but few biologists confess to such a belief, for the spirit of science is always against the assumption of a mystic, divine vital force to explain things it cannot understand. It always hopes that further observation and study will yield some new physico-chemical forces which will explain all naturally. But the scientist cannot prohibit the theist from having his own interpretation of nature's facts. As was suggested earlier in this discussion, the universe has two sides, the physical which is visible to the senses, and the spiritual which is open to those who have eyes to see the mysteries of God. On this latter side we see the forces which are back of the laws of nature, and realize that the Divine Energy is at the heart of things, guiding and over-

[31] *Naturalism and Religion,* pp. 184–186.

ruling the whole process of continuous creation by definite modifications through immanent directive and formative forces which work in harmony with the environment and gradually embody the type of species in final form. Later on more will be said of the meaning of Divine Immanence,[32] but for the present it will be sufficient to echo the opinion of John Fiske, frequently expressed in his later years, that the doctrine of evolution makes God our constant refuge and support, and nature His true revelation; and when all its religious implications shall have been set forth, it will be seen to be the most potent ally that Christianity has ever had in elevating mankind.

We prefer to think that the organic evolution process has attained its end. As far back as human history goes there have been no great changes in species, save such as are due to man's wonderful power of domestication of wild forms of plant and animal life, showing himself in this to be the lord of creation, able to bend all organic nature to his use. The earth in becoming fit for human habitation has reached its goal. And with this the veteran evolutionist, Alfred Russell Wallace, agrees in his latest book *The World of Life:* "In the present work I recur to the subject after forty years of further reflection, and I now uphold the doctrine that not man alone, but the whole World of Life, in almost all its varied manifestations, leads us to the same conclusion — that to afford any rational explanation of its phenomena, we require to postulate the continuous action and guidance of higher intelligences; and further, that these have probably been working toward a single end, the development of intellectual, moral and spiritual beings." [33]

(In the Appendix, Note K, is given a discussion of Instinct, which is one of the most perplexing questions with which the evolutionist has to deal.)

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[32] See Chap. X.
[33] Pp. 340–1.

CHAPTER VI

THE WITNESS OF THE INTELLECT

THE ANTHROPOLOGICAL ARGUMENT

We turn now from the world of matter to the world of spirit. The Anthropological Argument, which is the last of the "proofs" of God by reasoning, or the Witness of the Intellect, is founded not on the observation of nature, but on the contemplation of the inner world of personality. We argue by direct inference from our own consciousness of self, freedom, and duty to personality and moral character in our Maker, attributes which nature does not reveal at all. These affirmations of consciousness are as certain and as valid as the phenomena of sensation, and offer the highest basis for the conception of Deity. As He cannot be material, we must logically think of Him in terms of consciousness, not of sensation; under psychical and spiritual, not physical and material analogies; as free spirit, not mechanical force.

It is worth while in passing to note how St. Paul separates this argument from the cosmological. In Rom. 1: 19, 20 he tells us that nature reveals the divinity of God in might and power, while in 2: 14-16 he deals with the witness of conscience, the divine law written on the heart, to the spirit and character of God. So Bacon making the same distinction defines Natural Theology to be "that knowledge or rudiment of knowledge concerning God, which may be obtained by the contemplation of His creatures," and adds, "no light of nature extendeth to declare the will and true worship of God."[1] William James comments, "If there be a divine Spirit of the Universe, Nature, such as we know her, cannot possibly be its *ulti-*

[1] *Advancement of Knowledge,* Bk. II, § 12.

mate word to man."[2] That this is true is evident from the fact that we actually dare to judge Nature. We interpret her in terms of our own highest thought. This conscious superiority to the material universe cannot be without significance.

That man has a higher self than his material being has always been recognized. The word man itself is derived from the Indo-Germanic "men-," which means "to think." Origen (whose views were strongly dualistic) in using the word man comments, "I mean a soul using a body."[3] This reminds one of Hamilton's definition that man is not an organism, but an intelligence served by organs.[4] Locke gives the argument in its old form on the intellectual side, and calls it a demonstration, because it is so simple and direct that he treats it as almost self-evident, an intuitive inference. He argues, I am a thinking being, therefore, the eternal something which is the source of my being must be a thinking Being also; for it is impossible that what is itself wholly void of knowledge and operates blindly without perception of its own action, could produce such a being as I am.[5]

This argument from man's powers to God's is as primitive and universal as the teleological. Men have ever believed in a personal God and felt that He could not be less than themselves. When they began to look within at their own natures they thought of God as like unto themselves on their higher side of mind and will and character. This was the prophet's message to Israel when she inclined to the pagan idea of God as a Power, often evil, or at least hard and unfeeling, to be worshiped by vile rites. The God they revealed to the erring nation was holy, righteous, and loving.

The argument is criticised on two grounds, (1) because it is anthropomorphic, and (2) because it is thought to make an unwarranted use of the law of efficient causation.

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[2] *International Journal of Ethics,* Oct., 1895.
[3] *Contra Celsus* 7:38 (ἄνθρωπος . . . τουτέστι ψυχὴ χρωμένη σώματι).
[4] *Lectures on Metaphysics,* p. 21.
[5] *Essay Concerning Human Understanding,* Bk. IV, ch. 10, §§ 1–6.

1. "It is manifest anthropomorphism, a conceiving the Infinite in terms of human experience." But the same objection applies to any conception of this Infinite One whatever, since all our thinking is under human conditions. We can only think of the Divine Being and His action under three human analogies — physical force, acting mechanically from without; life, the teleological and immanent but unconscious force in organisms; and self-conscious will-power or personality.[6] The last is undoubtedly the highest and truest, yet it has become the fashion to sneer at such a conception of God. We are forbidden to pass from the external study of nature to the inner study of man and those elements which lift him above the brutes. Herbert Spencer is just as anthropomorphic as any theistic thinker. As the idea of physical force comes from our consciousness of effort and power, his definition of "the Unknowable" in terms of energy is as anthropomorphic as is our conception of God as personal. In thinking of God we should use all the elements of our consciousness and not simply those connected with matter. If we are denied this we might as well say we cannot think of God at all.

Men have always felt that Deity must possess in perfection all our highest qualities. The real error is not the thinking of God in terms of our noblest thought, for we cannot think of Him in any other way, but the thinking that He is altogether such an one as ourselves. The Christian point of view is not so much that God is anthropomorphic, but that man is theomorphic, made in God's image, and therefore the best symbol of God. This was St. Paul's teaching at Athens. He forbids our making images of human bodies to represent God, but bids us think of ourselves as like Him in spirit. "Being then the offspring of God, we ought not to think that the Godhead is like unto gold, or silver, or stone, graven by art and device of man."[7]

Xenophanes makes the same distinction in his oft-quoted words: "If oxen and horses had hands and fingers like ours,

[6] Abbott, *Through Nature to Christ*, p. 45.
[7] Acts 17:27–29.

then would they paint and fashion the forms of their gods and give them bodies like their own, horse like unto horses, and oxen to oxen." But he also added the words expressing the inner likeness to us, which are not so often quoted: "God is all sight, all ear, all mind, wholly exempt from toil, He sways all things by thought and will." This reference to "thought and will" qualifies his broad opening statement: "One God there is, mightiest among gods and men, who neither in form nor thought is like to men." [8]

Oliver Lodge contends that the method of reasoning employed in the anthropological argument is legitimate: "The inference or deduction of some of the attributes of Deity, from that which we can recognize as 'the likest God within the soul,' is a legitimate deduction, if properly carried out; and it is in correspondence with the methods of physical science. . . . To suppose that the deduction of divine attributes by intensification of our own attributes must necessarily result in a 'magnified non-natural man' is to forget the facts of physical science. If the reasoning is bad, or the data insufficient, the result is worthless, but the method is legitimate, though far from easy." [9]

2. The Anthropological Argument is the expression of an intuitive judgment called by Leibnitz the Law of the Sufficient Reason, that the cause must potentially contain the effect, and that both must be alike, *i.e.,* homogenous, on the same plane of action or existence. Some consistent Empiricists attempt to discredit the argument by denying its main premise, the likeness between cause and effect. They put their objection in terms of apparent humility, and ask whether the ephemeral experiences of such a petty race of creatures as man furnish any adequate idea of the Absolute One in whom all the possibilities of being are comprehended. But we do not claim that our ideas are "adequate," only that they are true by analogy as far as they go. One thing is certain, God cannot be less than man.

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[8] Ritter's *History of Ancient Philosophy,* Vol. I, pp. 432–4.
[9] *Hibbert Journal,* Jan., 1903, pp. 216, 7.

Mill boldly affirmed that the Law of the Sufficient Reason is an *a priori* fallacy, because we constantly imagine a likeness between a cause and effect which does not exist. He, however, misstates the law, making it read "that the conditions of a phenomenon must, or at least probably will, resemble the phenomenon itself."[10] He thus produces confusion by speaking of "resemblances," and blames the law, as conceived by him, for some of the extravagances of the past as, for instance, the doctrine of signatures of the Middle Ages when an herb or animal organ was administered to a patient because some external characteristic of it resembled the diseased condition or organ. Thus the brilliant yellow color of tumeric indicated it as a cure for jaundice. He thinks that the same fallacious way of arguing, more scientifically phrased, is continued today. But inasmuch as he has misstated the law, his objections are without weight. Besides this he does not admit any force but mechanical force. Biological force, psychical force, and will power all fall under his ban, hence the inadequacy of his attitude toward cause and effect.[11]

This line of evidence is often called the Moral Argument, but it is more properly designated the Anthropological, for it embraces other elements in consciousness besides conscience. Human personality is three-fold; self-consciousness, I am I; self-determination, I will; and right-determination, I ought. These are the primary and universal elements in all thought and action. All language expresses them, all history embodies them. In reasoning from the personality of man to the personality of God the argument naturally falls into three divisions; (1) the witness of self-consciousness, (2) the witness of freedom of action, and (3) the witness of conscience to the nature of God.

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[10] *Logic*, Bk. V, Chap. 3, § 8.
[11] See Note L.

I. Self-Consciousness: Personality

Self-consciousness is the knowledge by the mind of itself as the permanent and indivisible subject of its own operations. Even those who deny personality accept the self-knowledge of it as a fact of consciousness. Spencer tells us that personality is a fact of which every man is conscious, a fact beyond all others most certain. Yet he, and others of his school, because they cannot understand it or express it in terms of sensation, tell us that it is a delusion and not possible in the nature of things. But this is no argument against personality. On the contrary the ineradicable conviction of personal identity in every man's consciousness is a real fact of the spiritual world, not something that can be interpreted by the terms of matter. Personality can be expressed only in spiritual terms. It is the deepest fact in all experience, and one which we must use in interpretation of other beings like ourselves. As Carlyle says, "Believe it thou must, understand it thou canst not."

The chief basal elements of personality are self-consciousness and self-identity. "I know myself," and "I am I." This dual consciousness is a mystery beyond our grasp. The ego is the unifying element of thinker and thing thought. No experience is possible apart from its unifying power, which brings all experiences into mutual relation as concerning one subject, and holds them united in the strange power of memory. Man thinks, wills, and acts, but the central fact of which all these are but so many partial aspects is the fact that he is a self and knows himself. Mansell warns us of the difficulty we experience in expressing this conception. "This self-personality, like all other simple and immediate presentations, is indefinable; but it is so because it is superior to definition. It can be analyzed into no simpler elements, for it is the simplest of all; it can be made no clearer by description or comparison, for it is revealed to us in all the clearness of an original intuition, of which description and comparison can furnish only faint and partial resemblances." [12]

[12] *Prolegomena Logica,* p. 123.

Our self-consciousness demands a ground and cause which cannot be less, but must be more, than we are in consciousness. No movement of thought is more direct than the affirmation that the Power back of the world and ourselves must be personal, *i.e.*, must be self-conscious and know Himself as unity. He must be able to speak of Himself as "I." God of course transcends man infinitely; but this qualification does not destroy the reality of His being a person, it merely affirms that He is the transcendent Person. In conceiving God as personal we do not drag Him down out of His mystery, within reach of our understanding, for our personality is itself a baffling mystery. We believe profoundly that our personality is finite and limited; God's is infinite and perfect. But "infinity" cannot change a quality into its opposite, *e.g.*, personality into impersonality, which is not a higher but a lower conception. All attempts to make God supra-personal, "higher than consciousness," result in making Him infra-personal, a Being who does not know that He is Himself. If the Infinite and Eternal Energy does not know itself, but wills blindly and wildly, not knowing what it wills, and works unconscious of itself and its end in working, then it is not a higher being than ourselves, but a lower. As each man has an inner center of consciousness hidden from others, which looks on its own motives and thoughts, so God must be a self-conscious Being, a Mind whose depths no finite being can penetrate, but of which He can make known as much as He wills, just as we make our thoughts known to our fellows. The pantheistic talk about a spirit higher than personality, is a contradiction in terms. An "impersonal spirit" is equivalent to an impersonal person. We might as well talk of a triangle with four sides, or a quadruped with only two legs. Spirit without personality is simply sublimated "force," as the Left Wing of the Hegelians have rightly insisted.

To the old objection that all this is to make the Infinite One a mere magnified man, we answer that it is at least a whole

man we magnify, and not some isolated part of a man, like Spencer's bare Force, or Schopenhauer's Will minus Consciousness, or Von Hartman's Idea which works to a definite aim intelligently but in entire unconsciousness, or Matthew Arnold's Power making for Righteousness, but is not righteous itself — all barren abstractions drawn from portions of our experience, which have no counterpart in real life; for man is a unity, and acts as a person. Romanes says that "to speak of the Religion of the Unknowable, the Religion of Cosmism, the Religion of Humanity, and so forth, where the personality of the First Cause is not recognized, is as unmeaning as it would be to speak of the love of a triangle, or the rationality of the equator. . . . Humanity, for example, is an abstract idea of our own making: it is not an object any more than the equator is an object. . . . The distinguishing feature of any theory which can properly be termed a Religion, is that it should refer to the ultimate source, or sources of things: and that it should suppose this source to be of an objective, intelligent, and personal nature. To apply the term Religion to any other theory is merely to abuse it." [13]

Fiske reminds us of the inadequacy of a vocabulary forged on the anvil of material experience. "Words which have gained their meanings from finite experience of finite objects of thought must inevitably falter and fail when we seek to apply them to that which is Infinite. But we do not mend matters by employing terms taken from the inorganic world rather than from human personality. To designate the universal Power by some scientific term, such as Force, does not help us in the least. All our experience of force is an experience of finite forces antagonized by other forces. We can frame no conception whatever of Infinite Force comprising within itself all the myriad antagonistic attractions and repulsions of which the dynamic universe consists. We go beyond our knowledge when we speak of Infinite Force quite as much as we do when we speak of Infinite Personality. Indeed, no word or phrase

[13] *Thoughts on Religion*, pp. 41–43.

which we seek to apply to Deity can be other than an extremely inadequate and unsatisfactory symbol. From the very nature of the case it must always be so, and if we once understand the reason why, it need not vex or puzzle us." He proceeds to show that, however inadequate our language, we must convey the idea of personality in God if we are to understand the spiritual environment in which man's spiritual instinct finds its source and answer. "Take away from our notion of God the human element, and the theism instantly vanishes; it ceases to be a notion of God. We may retain an abstract symbol to which we apply some such epithet as Force, or Energy, or Power, but there is nothing theistic in this. Some ingenious philosopher may try to persuade us to the contrary, but the Human Soul knows better; it knows at least what it wants; it has asked for Theology, not for Dynamics, and it resents all such attempts to palm off upon it stones for bread." [14]

The denial of God's personality is so common in the popular mind today that it must be referred to here, though the full discussion of it belongs to Pantheism and Agnosticism. Such philosophers as Spinoza, Schopenhauer, Von Hartman, and Spencer tell us that to think of God in terms of personality, consciousness, and will, is to limit His infinite Being. It sounds reverent to tell us to beware of limiting God, but the law of the excluded middle leaves us no alternative. God is either personal in the highest sense, or not personal. To affirm that self-consciousness, identity, freedom, and moral character are limitations of being, is to affirm on the other hand that unconsciousness, ignorance of self, absence of will and power to act are not limitations of being — an idea which we know to be absurd. We know by contrast of ourselves with mechanical force and animal life, that these qualities enlarge and exalt our being. The attributes of personality are not limitations, but liberations from the fetters of mechanical law and animal instinctive life. Here centers the conflict of

[14] *Through Nature to God,* pp. 158, 9 and 166.

philosophy with theology. The philosophic deity of pure abstraction has no significance whatever for religion. The anthropomorphic God is the only God whom men can worship and serve.

It is only the purely physical student, who has forgotten or lost himself in the study of things, who can seriously entertain thoughts of God's impersonality. It is a question not of science or of logic, but the deeper one of our estimate of the value of mind, of the worth of personality. On the physical side our insignificance beggars description; what were Plato and Kant, Dante and Shakespeare, Cæsar and Washington, but so many pounds of earth organized for a brief space into living bodies and then crumbling into dust to fertilize the soil? Some people are struck dumb by the overwhelming contrast between such specks of "matter" and the vast globes and infinite spaces of the universe. But at what are we appalled? At our own powers! The cosmos is our own discovery. The mind of man has penetrated into its remotest corners and wrung from it its secrets. Such a discovery is a revelation of the spiritual greatness of the discoverer. Man invents the telescope which reveals starry clusters of untold systems, but none is so great a wonder as the mind's eye at the other end of the instrument which interprets the specks of light. To human thought no depths of time or space are obstacles. It penetrates distances so great that our algebraic symbols can barely express them, and passes backward or forward over infinite periods of time, at home in all. Man's body is subject to the laws of matter, but the fact that he knows those laws, and can use them for his own ends, shows that he transcends their limitations.

The universe dwarfs us only on one side, and that the lowest, our body. In every other respect we look down upon it. Mind has no magnitude, but it has worth and dignity. Material size and moral excellence are not comparable. The smallest expression of personality is greater in worth than the vastest physical aggregation. Isaac Watts wrote long ago:

"Were I so tall to reach the pole,
Or grasp the ocean with my span,
I must be measured by my soul;
The mind's the standard of the man." [15]

Pascal placed man's greatness precisely in the fact that, while the powers of nature crush him in a moment, he knows himself and the world; he dies, but he knows that he is dying, and looks beyond death to a larger life.

It is science which gives us the faith in progress. It shows a steady movement which culminates in man as its head; but a head so peculiar and different from all that goes before it, that we feel that while man is the end of the development, he is not wholly of it, but rises, as Le Conte and Wallace and Fiske hold, above it, though out of it. Most evolutionists agree that man is the final form — no higher being will appear on earth "in the flesh." But is he the final form, in the sense that life not only culminates in him but ends with him, that in a few millenniums as the earth grows cold the retrograde devolution will sweep humanity off the globe into nothingness, as ruthlessly as it has destroyed all preceding dynasties of living things? Man has risen through the brute, from matter to spirit. Each advance in the process has been an advance in quality of life, not in mere strength or bodily vigor, but in refinement of organization and development of mind. If the age-long movements end in a being, who knows himself and knows God, and if, having reached the highest point, mankind is hurled back into the dust, till the race disappears utterly, then the whole process is a bitter and cynical delusion. Even Omar Khayyám recoiled from the thought of a God who would so stultify himself:

"Ne'er a peevish Boy
Would break the Bowl from which he drank in joy;
And He that with his hand the Vessel made
Will surely not in After Wrath destroy." [16]

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[15] *Horae Lyricae,* Bk. II, *True Greatness.*
[16] *Rubáiyát,* LXXXV.

If, as our reason suggests, the entire upward movement of evolution is a gradual disclosure of supreme reality, if the successive stages of the ascending scale of being form a progressive manifestation, and if in that manifestation the richest in significance is human life, and if human life finds its full expression only in personality, then are we driven to the thought that personality, the consummation of the whole process, must form our deepest clue to the nature of God. The evolution which culminates in human personality points beyond itself to a final revelation of the Divine Personality. Men have always found God most clearly and deeply by looking within and not without, by withdrawing "into the temple cave of their own selves."

In the very deepest truth God and man stand and fall together, because in the same degree as we appreciate our own personality do we appreciate God. Where personality is weakened or denied the sense of duty is undermined. The strong men of the world have shown this in their sense of personality. Cæsar said to the men in the skiff, "You carry Julius Cæsar; do not be afraid, my work is not yet done."

II. Freedom of Action

The human will is not a "faculty" of the mind, as the old psychology taught. It is rather the immediate expression of the whole personality. It is the self, deliberating, choosing and acting on its own motion. Kant makes freedom the *differentia* of man in distinction from things which float helpless in the fixed sequences of causes and effects in nature. He says that will is a kind of causality belonging to rational beings, and freedom is the property of that causality which enables them to be efficient agents, independent of determination by outside forces. On the other hand, necessity is that property of irrational things which consists in their being determined to movement by outer causes. The essential difference between persons and things lies in this point of free inner action.[17] The consciousness of will and the power to produce

[17] *Fundamental Principles of the Metaphysic of Morals*, § III.

movement by action is one of the earliest and profoundest experiences of the child, and he soon learns to distinguish the things he does accidentally from those done purposely, for which he is morally responsible.

Person, or spirit, stands above the mechanical interaction of matter and force in nature. In this sense man is "supernatural." He can make things happen in nature that would never have taken place without his interference. As to the question of his action on, as well as in, the world of nature, our appeal is simply to facts, to what he has actually done, supplemented by his consciousness that his action is free. Up to the time of man's appearance on the globe its phenomena were all under the law of fixed forces, even in the realm of animal life, where they are purely instinctive. It would have been possible for a sufficiently gifted being to have predicted the whole course of the future development and gradual dissolution of the existing world under the action of known forces. But a vast change took place when man appeared, a creature with plans and purposes of his own, outside of the realm of chemical and mechanical forces, capable of saying "I intend to do this" and "I will do that." Possessing a will joined to an intelligence infinitely higher than any which had yet appeared, man was able to treat the earth as his own, to subdue the powers of nature, and fashion the earth's surface after his pleasure. All material and living things are used and treated as man's property according as his needs demand.

Here again we say that man and God stand or fall together. Both must be free, or both are bound by the iron chain of fate. Balfour reminds us that the difficulties connected with God's action on the world are not peculiar to theology. "Naturalism itself has to face them in a yet more embarrassing form. For they meet us not only in connection with the doctrine of God, but in connection with the doctrine of man. Not Divinity alone intervenes in the world of things. . . . Each living soul which acts on its surroundings raises questions analogous to, and in some ways more perplexing than, those suggested by the

action of a God immanent in a universe of phenomena."[18]

Hence if man is free to affect the course of nature at all, if his volition counts for something in producing events, still more must God, the world's Master and Maker, be free to act in and on the world of phenomena, though we know not how, and cannot see Him acting, any more than other men see our spirits acting, though they see the resulting motion in our bodies. If all human actions have taken place without producing chaos, if the material world is so created that man can act freely to direct its forces, it is illogical to hold that God cannot so work. On the other hand, if man is not free, but only thinks himself so, if he is a conscious automaton, bound to a fixed order of thought from the cradle to the grave, if he is a mere puppet acted upon by the forces within and without, then the only God that is credible is Spinoza's God of Pantheism, the sum total of the cosmic forces, entangled in matter, working all things according to the law of necessity that allows him no freedom. There is either freedom in God and man, or freedom in neither. There is no third alternative. The same arguments which deny design and rational will in nature, are equally effective against any possibility of human will and action in the world of human relations. The scientific materialists do not hesitate to accept that side of the dilemma which denies freedom. Thus Haeckel affirms that necessity is law, and is just as binding on the sum total of forces that we call God, as on the separate centers of force which for a few years are embodied in man. In reply to this might be quoted the opinion of the logician Sigwart that: "Our will, with its conviction of an 'ought' . . . refuses to acknowledge this infallible necessity, and opposes to the course of nature ideals which are only realized by free action. . . . There is nothing in our treatment of logic to prohibit a view of the universe according to which the most fundamental fact of self-consciousness is the will."[19] The denial of human freedom

[18] *The Foundations of Belief*, p. 311.
[19] *Logic*, Vol. II, pp. 556, 7.

will come up for full discussion later,[20] and for the present it will be sufficient to quote Illingworth's statement as to weight of philosophic opinion in favor of the freedom of the human will. "The freedom of the will is the very nerve of personality; and the variety of the terminology used by its different advocates, in different ages, must not be allowed to obscure the great philosophic tradition in which they agree. It is a case, indeed, in which the appeal to 'the authority of philosophy' is of especial use. For the freedom of the will is really attacked on *a priori* grounds, and defended on grounds of experience; *i.e.*, it is attacked as being inconsistent with various natural analogies, or theoretic presumptions, and defended as being a fact of which we are directly and immediately aware. Now many a man, when he finds acute thinkers discrediting a primary verdict of his consciousness, is apt, with superfluous humility, to think they must be more clever than they seem, and therefore to defer to their authority. It is important, therefore, to draw attention to the fact that the immense weight of philosophic authority is beyond question on the other side."[21] The modern philosophic movement, Pragmatism, holds the freedom of the will as one of its chief tenets.

The main ground for the naturalistic denial of freedom of the divine will is the absolute uniformity of nature. This is the old fallacy of Positivism, which we have already discussed,[22] that the discovery of the sequences in any given process explains the cause of its regularity. True, there is no fickleness in nature. The many gods of mythology have disappeared in the light of experience with nature's interrelation and unity. But the same harmony which proves that there are not many wills at work in the universe, proves that there is one supreme Will at the center.

The magic word which is supposed to make all clear is the word "law." If anything is to be explained, law is the solution. What is law? In its primary signification law is the

[20] See Chap. XVIII.
[21] *Personality, Human and Divine,* pp. 227, 8.
[22] See pp. 44–47.

authoritative expression of human will enforced by power. The instincts of mankind, finding utterance in language, have not failed to see that the phenomena of nature are only conceivable to us as, in like manner, the expressions of a Will enforcing itself with power. But, as in other cases, the secondary or derivative senses of the word have supplanted the primary signification; and "law" is now habitually used by men who deny the analogy on which that use is founded and to the truth of which it is an abiding witness.

It is true that every law is in its own nature invariable, and forces if taken singly produce ever the same effects, provided the conditions remain the same. But if the conditions vary, the invariability of effect gives place to an infinite capacity of change. It is by altering the conditions under which a given force works, or by bringing other forces to operate on the same object, that our wills act on the world. To this end uniformity of law is indispensable. Unless the action of forces were unchanging, they could not be instruments of will. The notion, then, that uniformity of law is contradictory to the subordination of forces to our wills, or to God's, is a notion contrary to our experience. That which governs the forces of nature to definite ends is the divine will forming variable combinations of invariable forces. There is no ordered series of facts which is not due to a combination of forces, and there is no combination of forces which is invariable and not capable of unlimited change. Therefore we may say that the forces of nature are not rigid but pliable and ever changing.

The denial of freedom of action in God springs from the curious idea that freedom means caprice, and therefore is inconsistent with the constancy of natural laws. But if natural law be rational order, the product of mind, why should not mind freely will it? Caprice is no part of the essence of freedom. A sane mind, in the same degree as it is sane and wise, holds to the purpose and plan of action which seems wisest. It may vary, but it does not do so without a reason which seems good. The wiser and the better a man is, the more uniform becomes his method of action. Caprice is the

result not of freedom, but of our wills being fettered or perverted by lack of knowledge as to the best course, or by lack of power to carry out our plan, or by lack of good will to do what we ought to do in given cases. God's uniformity is the result of His infinite knowledge, almighty power, and perfect goodness. The Old Testament constantly tells us, "He is not man that He should repent," *i.e.,* change His mind, and the New Testament more graphically speaks of Him as "the Father of lights, with whom can be no variation, neither shadow that is cast by turning."[23] His will is the expression of His character, and at the service of both is the knowledge which knows the universe through and through and the power which resides at the center, touching the secret source of its forces. The uniformity of nature, of which many make a very fetish, is itself an expression of wisdom and love, for without the maintenance of those steady unchanging "habits" of divine action which we call laws of nature, the world could not be what it is meant to be, our training school in mind and character. A lunatic world would make lunatic men.

That the system of nature is hard and unbending to us, does not prevent its being plastic and fluid to the divine will. Our bodies are a vast congeries of living cells, each cell an organism independent of our control, obeying chemical and physiological laws. No wonder the body seems to the scientist a self-developed and self-controlled machine, yet we know by our inner consciousness that it is obedient to our will, though *how* the will can act on it no man knows. Our various modes of action become more and more uniform and automatic in the same degree as we know and will and practise them longer. Once we had to take pains and effort to walk, now we walk without thinking at all, barely willing the movement. With still more difficulty did we learn to speak, now our thoughts quickly shape themselves in words. This is true of every art, writing, reading, playing the piano, batting a baseball, whatever we know perfectly, we do automatically and unconsciously. Yet the

[23] I Sam. 15:29, and James 1:17.

will is back of the whole complex action, though we are unconscious of it, for we can check it in a moment. Mind and will are consciously active only on the outer fringe of mental action, for most actions have become instinctive.

Even so we can and must think of the Divine Will as back of the marvelous phenomena of Nature. Her perfect and uniform laws are simply the operations of the perfect Mind, which knows nature completely and works from within. We do not marvel at common things, but in truth nothing is more wonderful and scientifically incomprehensible, than the prompt obedience of our bodies to our wills. Why should not the universe be equally obedient to the indwelling Spirit of God?

We are thus led directly up to the thought of the Divine Immanence in nature, a view to be more fully discussed later.[24] This replaces the older mechanical conception of God as standing, as it were, outside the universe, and working as we work on matter. The arguments from cause, order, and design are consistent with the idea of a deistic or remote God: but this present line of argument suggests God's working from within, with a constant outpouring of divine energy acting under divine laws. Our sense of will-power, the real source of the idea of cause, requires us to see conscious will back of the universal causation in nature, *i.e.,* the immanent presence and action of God. The proper analogy is not energy, or even vital force, but intelligent, personal will.

Prayers for Temporal Good

If there is any one point where the Christian student is genuinely troubled today by the controversy between religion and science it is on the question of the efficacy of prayer. The wide prevalence of the scientific spirit, affirming as axiomatic the absolute uniformity of the laws of nature, has given rise to a common distrust of any prayers which concern our bodies or the outer world. Sir Oliver Lodge, in an article in the *Hibbert Journal* in 1902, put the problem into a clear statement. "This

[24] See Chap. X.

is the standing controversy, by no means really dead at the present day. Is the world controlled by a living Person, accessible to prayer, influenced by love, able and willing to foresee, to intervene, to guide, and wistfully to lead without compulsion spirits in some sort akin to Himself? Or is the world a self-generating, self-controlled machine, complete and fully organized for movement, either up or down, for progress or degeneration, according to the chances of heredity and the influence of environment?"

Prayer is a universal human instinct. Plutarch tells us that prayer is found wherever man is, for there are no cities without temples where prayers and sacrifices are offered. In this view the modern anthropologists support him. It has ever seemed natural to man in the hour of need to call upon the name of the Lord. It is surprising to note that in great calamities the heathen make their appeal not to the lesser deities, but to the one God felt to be supreme over all. Thus Aulus Gellius tells us that the ancient Romans when alarmed by an earthquake were accustomed to pray not to any one of the gods individually but to "God" simply. Max Müller says that at critical moments when the deepest feelings of the heart were stirred the ancients dropped the language of mythology, and fell back on the universal language of true religion. Human nature in agony is never atheistic. The soul that knows not where to fly terror-stricken turns to God.

It was suggested above that in man's ability to control the forces of nature to his own ends we have an *a fortiori* argument for God's ability to control the forces of the universe which He created, and which His divine will sustains. Consider how much of our human life is regulated by the requests we make of one another. We do not like to say we pray to one another, because prayer is more than request, but in the restricted use of the term in our present discussion, it amounts to that. A man swallows poison, and according to the laws of nature death is certain. We pray the physician to help, and he gives an antidote which saves the man's life. True the thing was done by setting in operation other laws of our physi-

cal nature which counteracted the first chain of circumstances, but who can deny that God may act in just such a way? No one has a right to postulate that God's action can only be by *breaking* the laws of nature. That would make Him less powerful and wise than we are.

Much harm has been done to the belief in prayer by the claim on the part of its well meaning advocates that God answers prayers in the temporal realm by injecting into nature's order forces foreign to our experience, and laws which overrule those now in operation. Such a supposition is not necessary. As has been shown, if God controls all the conditions under which forces act, He can bring about any result He wishes in what to us is a natural way. The scientist in his laboratory always has to isolate the forces with which he works in order that he may get the expected result to his experiment. The will of God acts like the will of man by causing variable combinations of invariable forces. To give rain to a particular section of the country ought to be possible to God without causing any violation of the laws of meteorology, for it merely involves perfect control of all the conditions governing rainfall. Thus there is room for the answer of all wise and true prayer, even though our limited knowledge and insufficient powers of observation keep us from understanding all of God's action.

The assailants of prayer strive eagerly to make it appear that "special providences," such as we pray for in personal or national calamities, are the same thing as miracles. But the efficacy of prayer and the miraculous do not stand and fall together. It confuses the issue to equate them. A miracle is a phenomenon unexampled in the course of nature and beyond the operation of its forces, which attests its divine source by the character and teaching of its worker.[25] Special providences on the other hand, are not unusual occurrences, except that their happening coincides with the need they relieve. The answer to prayer is often so "natural" that we fail to observe God's

[25] See Note S on the *a priori* argument for miracles in connection with the discussion of Divine Immanence in Chapter X.

control of the causes leading on to the desired effect. Dr. Grenfell of Labrador tells of sending a vessel to establish a new mission station in Baffin's Land through unusually abundant ice to a coast of which he had no chart, and without any pilot on board who had ever been there. It was risking the schooner, for it was not sheathed for ice, and hence could not be insured. Before and during the voyage they all prayed earnestly for the success of the venture. They passed successfully through more than a hundred miles of ice before they came to the latitude in which they expected to find their haven. At this psychological moment an Eskimo hunting seals in a kayak was observed. He came aboard and told the voyagers he knew where they wanted to go, and would pilot them in. This he proceeded to do promptly and successfully.[26]

Many prayers are answered by psychological suggestion to the persons concerned or to others. In September, 1863, Dr. Jacob Chamberlain with a large company of native porters was caught by swollen streams in a dense jungle in India. Night was rapidly approaching. The marshy ground and the tigers prevented camping where they were, and the nearest hill was ten miles away. The chances of reaching it after nightfall were slight. After he had prayed for help and guidance, he heard a voice saying, "Turn to the left, to the Godávery, and you will find rescue." The guides protested the uselessness and madness of leaving the path for the swollen river, where their plight would be worse, and much valuable time lost. Again he heard the voice, and again he yielded to the arguments of the guides. When the voice came a third time he no longer hesitated, but ordered the party to turn to the left. At the river they found a large government ferryboat which had been torn from its moorings by a sudden freshet that morning with two ferrymen, and had been carried many miles down stream. The boatmen had succeeded in bringing it to shore at the point where Chamberlain and his party emerged from the jungle. On it they spent the night in

[26] *Outlook*, Dec. 11, 1909.

safety, and the next day used it to transport themselves to their destination.[27] During the World's Fair in 1893 Dwight L. Moody called to his help in Chicago a large number of evangelists and Christian workers, and organized an evangelistic campaign throughout the city. The renting of halls, entertaining of workers and other expenses entailed heavy burdens upon him. Toward the end of the campaign he was especially burdened with the expense and needed ten thousand dollars. As he was going into a service at the Auditorium, a lady sent word that she wished to speak to him personally. He could see her only for a moment, but that, she said, would be sufficient. She then placed in his hands an envelope, stating that she was the secretary for a lady in Chicago who had given her instructions to place that envelope in Mr. Moody's hands, and to give it to no one else. He opened it and found a check for half the needed sum. He went to the donor and expressed his gratitude, saying that he had been making the matter a subject of prayer. She replied that she had been impressed that morning to help him. Upon hearing that it was only half the amount which he needed, she supplemented it immediately with another check for the remaining amount.[28]

The modern world, except in great crises, has to a large extent lost the habit of prayer, especially in the realm of temporal things. The Church acting as a body must make her petition for what she especially needs in time of distress, as well as for the more general blessings of ordinary seasons. St. Paul's wise counsel was, " In nothing be anxious; but in everything by prayer and supplication let your requests be made known unto God." [29] Not to do so would be to become false to her own faith in God as Lord and Ruler of the universe, not a mere Force acting unchangeably. National prayers are as natural as the prayers of the Church which they resemble, for God is the God of the nations as well as of individuals. The Old Testament prophets bring God into the closest relation

[27] Chamberlain, *In the Tiger Jungle,* Chap. I.
[28] As related in a letter from W. R. Moody to the Editor.
[29] Phil. 4:6.

with the great nations and their destinies. When war is waged with the firm conviction that the cause is just, the nation certainly may pray for success, but always with the reservation that God's will with the nation shall be done.

It does not follow that God will answer all prayer, and we can only expect an answer if we are sure that our prayers are in the proper spirit, and are really for our best good and for the good of our fellow men. Again we turn to human affairs for our illustration. Not every request our fellow men make of us is granted, and especially well is this shown in the relation of the father to the child. Here we have the father's wisdom and love determining which of the child's more or less selfish and ignorant prayers shall be answered. Christ Himself endorses this analogy. "If ye then, being evil, know how to give good gifts unto your children, how much more shall your Father who is in heaven give good things to them that ask Him." [30]

1. Let us make this filial relation the first of the conditions of prayer that we must observe if we are reasonably to expect an answer. The invocation, "Our Father," with which our Lord began the prayer, which He meant should be the type of all intercession, gives the ground of all true prayer. The filial relation alone justifies prayer, and the expression of every wish which is not sinful. However, no child may set his father a task and make its fulfilment a test of his love. But the relationship of Father and son requires us to make requests even though God knows what we need. The Father desires the child to rely on Him and trust His willingness to care for it. Some things God cannot give without our asking. A human father may not be able to give his child what he most needs for spiritual growth and moral life unless he open his heart to receive it by asking for it. "Ask, and it shall be given unto you; seek, and ye shall find; knock, and it shall be opened unto you." [31] But when earthly and bodily good is asked, the Father in love may refuse it. Discipline and pain may be

[30] Matt. 7:11.
[31] Matt. 7:7.

sent for higher good. The earthly father thinks of manhood to come, and so God trains and develops us for the life eternal. We cannot judge of the means He uses, for this life is fragmentary, a preparation for the larger life to come. Temporal good and pleasure, even the most lawful are always secondary to the life of the spirit, which reaches beyond earth's limits. Another relationship grows out of our relation to God as His children, and that is that we are brothers one of another. God alone knows what is best for all in this great human brotherhood, and many prayers, which it would be perfectly legitimate for us to make, cannot be granted because others would be unhappily affected thereby. And again, for our prayer to be sincere, we must be willing to give to our fellow men the things we ask of God for ourselves.

2. The second condition of prayer is submission to God's will. The phrase in the Lord's Prayer, "Thy will be done," was strikingly illustrated by Christ's own prayer at Gethsemane. He prayed there in agony of spirit "Let this cup pass away, *if it be possible.* Nevertheless not my will but Thine be done." The phrase, "if it be possible," shows submission to God's infinite wisdom. Christ does not pray for the impossible, for though all things are possible to God, yet He has a plan for the redemption of the world which is the expression of His own fundamental loving nature, and this plan must not be changed though it involved the awful tragedy of the Crucifixion. God's will may seem severe and terrible, though at a later time it will be seen to have been for the best. We know God's will for us in the realm of the spiritual life, but we do not know it in the realm of temporal affairs. "If it be possible" forbids prayers when God's will is so plain that to change events would be to ask for a direct miracle. A time comes with the mortally sick when we cease to pray that the patient may recover, but seek to prepare him for his inevitable end by prayer for grace to submit and for increase of faith at the end. Prayers natural in earlier days would be irreverent now, because our increased knowledge tells us how necessary is the stability of God's government of the universe

for the good of all men. Further, we should work as well as pray. How otherwise can we understand the clause "Thy will be done on earth, as it is in Heaven"? We are called to be God's fellow-workers in the coming of His Kingdom, and our first duty after prayer is to use the means He indicates to bring about the result we long for. The faith-cure and the prayer-cure crazes ignore the fact that the essential element in Christian faith is not belief in God's omnipotence as at the disposal of our wills, but trust in His wisdom and His love, and glad submission to His ordering of our lives. To say sincerely, "Thy will be done," implies that we will try to do it ourselves and hence make use of every adaptation of nature to our needs which God has ordained, and made known to us through science.

3. The last of the conditions is that we must look on prayer as more than mere petition. It is essentially spiritual. It is communion between God and the spirit of man, and rises above the world of sense and the body's need. The verification of prayer lies in the inner sphere of spirit. The truest answer to some prayers may be the refusal of the specific request, yet the fulfilment of the deeper thought back of it. For true communion in prayer there must be two wills in correspondence—the will of him who prays and the will of Him Who hears. To deny this on God's side is to believe that the whole universe is a solid block, unbending and unfeeling, which would kill all prayer in time of need, or at the best turn it into a kind of spiritual gymnastic for one's own self-training. No man can really pray who looks on prayer as simply retroactive and purely subjective. No man can worship a mere heartless process, however divine some men may profess to think it. Men of heart under such conditions would cease to pray words of faith, and to do deeds of love. Then the true believer would be the Mahometan who sums up his full duty in the one word *Kismet*, "it is fated." On the other hand, to deny the will of the man who prays is equally subversive of faith, for it destroys utterly man's spiritual nature. If our tears and urgent cries have always been present to the mind of God as insignificant parts of

His omniscience, but never have the slightest influence on His predetermined plan, then are we indeed merely His puppets whom He has called into being, why, no man can tell, and our lives are but the playing of idle parts in an empty show. Then fervent supplications will die on our palsied lips, for we merely imagine that we can act as we please. While we must not lose the faith of a child in the Heavenly Father's love and care, we must pray with the mind of a man, and in the spirit of Christ, Who interpreted our manhood to us.

"Be not afraid to pray — to pray is right.
Pray, if thou canst, with hope; but ever pray,
Though hope be weak, or sick with long delay;
Pray in the darkness, if there be no light,
Far is the time, remote from human sight,
When war and discord on the earth shall cease;
Yet every prayer for universal peace
Avails the blessed time to expedite.
Whate'er is good to wish, ask that of Heaven,
Though it may be what thou canst not hope to see:
Pray to be perfect, though material leaven
Forbid the spirit so on earth to be;
But if for any wish thou darest not to pray,
Then pray to God to cast that wish away." [32]

[32] Hartley Coleridge.

CHAPTER VII

THE ANTHROPOLOGICAL ARGUMENT — (CONCLUDED)

III. THE WITNESS OF CONSCIENCE TO MORAL CHARACTER IN GOD

CONSCIENCE is the third vital element in personality, and is distinct from the other forms of consciousness. It is "feeling," not intellect. As the inner voice of a higher law, felt to be supreme over all wills, it witnesses directly to a moral order, which itself implies a moral Lawgiver, the Father and Lord of spirits. We enter here on a most convincing line of evidence as to the existence and nature of God, but it demands an inner eye and heart of feeling to value it. The intellect alone will not suffice, for there is a decided contrast between the world of phenomena and intellectual interpretation and the world of appreciation and moral judgment.

Conscience, the spirit's intuition of ethical distinctions and the feeling of obligation to do the good and not the evil, is a universal trait in humanity, and is ever associated with faith in a divine moral order. The argument founded on this fact is two-fold: (1) The cause of ethical feelings must be ethical. If sense-phenomena arouse the conviction of the reality of an external world of matter, so do moral experiences arouse the conviction of the existence of a moral order, independent of, but related to, our wills; (2) Ethical relations exist only between persons. Duty is something due to a person, never to a thing or a force. The spontaneous reverence we feel for the Moral Law as having authority over us implies a personal Will as the source, with the right to rule our wills. This supreme Person must be all He wills man to be. "The Power, not ourselves, which makes for righteousness," must be a righteous person.

Kant was the first to state clearly the moral argument. In his *Critique of Practical Reason* he completed the inquiry which he began in the *Pure Reason.* He had there shown that our speculative reason could not carry us beyond the limits of our material experience and either prove or disprove the existence of God, whereas the practical reason, reaching out beyond phenomenal experience, gives us the strongest and best evidence of God. As Kuno Fischer emphatically writes: "The doctrine of freedom, and the absolute supremacy of the moral order of the world, or the doctrine of the primacy of practical reason, rests with Kant upon firm ground. The moral proof for the existence of God stands or falls with this doctrine. Regarding the *theoretical* demonstrability of God's existence, Kant held different views at different stages of his philosophical inquiry. . . . But, however differently he may have thought on this point — namely, the *knowableness* of God — there was not a moment in the course of the development of his philosophical convictions when he denied, or even only doubted, the *reality* of God."[1] Kant assigns the primacy to practical reason, because its interest for man is supreme. Ethical life and character are more to man than intellectual ability or scientific knowledge. His starting point, or prior postulate, is moral freedom, the ethical will, which he deduces as an objective certainty from the fact of the moral law. This carries with it the ethical demand for the chief good as a reality. This *summum bonum* is composed of two elements, (1) perfect virtue, which implies God, and (2) perfect felicity, which implies immortality. His three postulates are, therefore, immortality, freedom, and the existence of God. "The *first* results from the practically necessary condition of a duration adequate to the complete fulfilment of the moral law; the *second* from the necessary supposition of the independence of the sensible world, and of the faculty of determining one's will according to the law of an intelligible world, that is, of freedom; the *third* from the necessary condition of the exist-

[1] *Critique of Kant,* c. ii. § 3.

ence of the *summum bonum* in such an intelligible world, by the supposition of the supreme independent good, that is, the existence of God." [2]

In this argument we move in an entirely different field of experience and thought from the intellectual and the material world, and we realize the striking difference between physical nature and human nature. We live in two worlds; the one a world of perception and observation in which we are conscious of outer facts over which we have little or no control. The other, a world of appreciation and moral judgment in human relations, in which we can control our words and acts under obligations implied in the peculiar form of consciousness which we call "conscience." The fact that they are two has been most strikingly put by Kant: "Two things fill the mind with ever new and increasing admiration and awe, the oftener and the more steadily we reflect on them: *the starry heavens above and the moral law within.* I have not to search for them and conjecture them as though they were veiled in darkness or were in the transcendent region beyond my horizon; I see them before me and connect them directly with the consciousness of my existence. The former begins from the place I occupy in the external world of sense, and enlarges my connection therein to an unbounded extent with worlds upon worlds and systems of systems, and moreover into limitless times of their periodic motion, its beginning and continuance. The second begins from my invisible self, my personality, and exhibits me in a world which has true infinity, but which is traceable only by the understanding, and with which I discern that I am not in a merely contingent but in a universal and necessary connection, as I am also thereby with all those visible worlds. The former view of a countless multitude of worlds annihilates, as it were, my importance as an *animal creature,* which after it has been for a short time provided with vital power, one knows not how, must again give back the matter of which it was formed to the planet it inhabits (a mere speck

[2] *Practical Reason,* Pt. I, Bk. II, Chap. 2, § 6. Abbott's translation, pp. 229, 30.

in the universe). The second, on the contrary, infinitely elevates my worth as an *intelligence* by my personality, in which the moral law reveals to me a life independent of animality and even of the whole sensible world — at least so far as may be inferred from the destination assigned to my existence by this law, a destination not restricted to conditions and limits of this life, but reaching into the infinite." [3]

Nature is morally indifferent; not immoral, but simply non-moral. The ancient Babylonians had two symbols for nature. One was an empty waste of waters, and the other was a circle full of intertwined snakes, devouring each other in wild confusion. The animal world has no experience of moral freedom and duty. Hence nature cannot bear such witness to God's character and will as it does to His power and divinity. Even naturalists of the mechanical school recognize this sharp contrast between man and the world of which he seems simply a part. Ray Lankester admits that man's relation to nature is unique; he is nature's insurgent son, who has become a power in her midst and modified her order. Huxley thinks that man's true life began when he revolted against nature's law of might, and with a sense of right in his soul struggled against the cosmic process. He holds there is more in the sentiment "I ought" than evolution can explain.[4]

Rousseau was the first sentimentalist to throw all the blame for man's evil will on laws and government, and to proclaim that the true ideal of man is the unfettered life of nature "when wild in woods, the noble savage ran." And it is still taught by many social reformers that the panacea for all evils, physical and moral, is a return to Nature, untrammeled by priest or king. The poets have done much to foster such sentimentality. Even so practical a man as Bryant tells us that "the groves were God's first temples," and reproves us for leaving "God's ancient sanctuaries" to worship "under roofs that our frail hands have raised." A glance backward into

[3] *Practical Reason,* Pt. II, beginning of "Conclusion," Abbott's translation, p. 260.

[4] See *Ethics and Evolution.*

the actual past would have shown him that if the "calm shades" taught him that we must "to the beautiful order of thy works learn to conform the order of our lives," it was simply because he carried to the contemplation of Nature eyes open to its higher meaning, and a heart and mind touched by the spirit of God to feel its perfect order.[5] The men who actually dwelt in the forests in the days when there were no churches, and apart from the influence of the Law or the Gospel, had no such high and holy thoughts. The groves were indeed their temples, but they were the temples of the gods of lust and cruelty. Their dark recesses were polluted with foul deeds of unspeakable infamy, and their rocks and stones, far from preaching "sermons,"[6] reeked with human blood and reechoed to the shrieks of human victims. There was no catechism of moral duty in the brute life about them, no lessons of purity and self-restraint, no revelation of a Father above in the flashing lightning and crashing thunderbolt or rushing flood. The wolves and tigers and crawling snakes who formed the emblems of their tribes could teach them nothing of the Ten Commandments; they learned nothing from them but lust and cruelty and pitiless selfishness, and came to be more treacherous than the serpent and more cruel than the tiger. As to pity, they knew it not. Useless consumers of bread, superfluous babies, the sick and infirm, frail slaves and aged people, were often coolly put out of the way. This is Nature's method. She knows but one law, the survival of the fittest, and the fittest in her vocabulary is simply the strongest, the beast best able to devour others or snatch food out of their mouths. The simple fact that what we call "humanity" has risen out of such a soil, shows that a power higher than Nature, having a moral quality and aiming at a moral end, has guided evolution. The working of mere brute power would even now run the world backward.

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[5] See *A Forest Hymn.*

[6] *As You Like It,* Act II, Sc. 1.

> "Find tongues in trees, books in running brooks,
> Sermons in stones and good in everything."

When man really degrades himself to the level of nature, he loses all higher character and becomes like Richard III in Shakespeare's tremendous words, "the slave of nature, and the son of hell."[7] Wordsworth is commonly true to ideals, but he slipped into false sentiment when he wrote,

> "One impulse from a vernal wood
> May teach you more of man,
> Of moral evil and of good,
> Than all the sages can."[8]

Directly the opposite is the case. Men who, like Wordsworth, have pondered the sages in their study, carry their own thoughts to nature, and read there a moral message of God and duty. On the ethical side nature hides God, while man reveals him. Browning strikes the deeper note in the Pope's speech in *The Ring and The Book*:

> "Conjecture of the worker by the work;
> Is there strength there? — enough: intelligence?
> Ample: but goodness in a like degree?
> Not to the human eye in the present state,
> An isoscele deficient in the base.
> What lacks, then, of perfection fit for God,
> But just the instance which this tale supplies
> Of love without a limit? So is strength,
> So is intelligence; let love be so,
> Unlimited in its self-sacrifice,
> Then is the tale true and God shows complete.
> Beyond the tale, I reach into the dark,
> Feel what I cannot see, and still faith stands."

This argument from conscience cannot be too strongly urged, for Secularism — the deliberate ignoring of religion — not only dominates our school system today, but rules in our university teaching as well, where God and duty to God are words studiously neglected. This is right in science, but not in the field of theoretical and practical ethics. Ethics is commonly treated under the utilitarian or social aspect, but this teaching will

[7] Act I. Sc. 3.
[8] *The Tables Turned.*

not work well in the long run. It is one thing to say that honesty is the best policy, and another to get out of that prudential saw the inspiration to be truthful and honest under temptation. A man with no God, whether he is a savage or a twentieth century philosopher, recognizes no obligations except those which will best promote his pleasure or profit his well being; but he who believes in God inevitably realizes that he should be holy as God is holy. If there is no ideal higher than self, then self becomes the end. If, on the other hand, the ideal is the perfect One, then the man striving for that ideal is gradually transformed into that likeness.

Locke, Montaigne, and Pascal criticize any universal system of ethics. To them morals are "nothing else but our own opinion or judgment of the moral rectitude or pravity of our actions." [9] Pascal thinks that if there were such a thing as a universal justice, "we should see it planted in all the states of the world and in all times, instead of which we see scarcely anything just or unjust that does not change quality in changing climate. Three degrees of higher latitude overturn all jurisprudence. A meridian decides the truth; fundamental laws change in a few years: right has its epochs. Pitiable justice, bounded by a river! Truth this side the Pyrenees, error that side." [10] Pascal and others like him deal only with externals and not with the inner spirit. They lacked the evolutionary conception which we have today. There is a growth of moral and ethical ideals, and each age must be judged by its own standards. It is a fundamental fact that where there is no law there can be no transgression. We do not judge children as morally guilty until they reach the ethical stage where the law they have broken belongs. Human history on its inner side is a process of moral training and education, and to be real and permanent it must not be outer, enforced obedience to authority under penalty, but inner growth in personal convictions. Each age as it advances has higher ideals in the light of which it condemns its own beginning and the former ages. In

[9] Locke, *Essay on the Human Understanding,* Bk. I, Ch. 3, § 8.
[10] *Thoughts,* Ch. 4, § 4.

Israel the prophets were the great moral leaders as well as preachers, and they raised the moral ideal to a higher level than anywhere else in the ancient world. They were often bitterly abused, rejected and even slain, but later the lessons they taught took root in the hearts of the people, and the children of those who slew the prophets built their sepulchers. The fact that there is no universal code of morality does not deny that there is a universal moral instinct in man. Indeed there are certain fundamental principles in which this instinct finds expression. For instance if you go unarmed and share salt with any tribe you are thereafter their friend by the principle of hospitality. Quartrefages goes so far as to say that "the fundamental identity of human nature is nowhere more strikingly displayed" than in the moral region.[11]

Customs should be judged by the intention which underlies them. This Pascal fails to do. Things which seem abhorrent to us are often done with good moral intention. Paul held the clothing of the men who stoned Stephen to death, and thought he was doing God service. On his own words we justify him. Many of the persecutions of the Middle Ages resulted from the honest effort on the part of some to save souls. This is, however, not the same thing as saying that a thing known and recognized to be evil may be done that good may come. The gradual growth of ethical ideals may lead a later age to pronounce methods as evil which to the people of the past seemed perfectly legitimate. South Sea Islanders kill their old folk because life has become a grievous burden to them, but the medical profession of the civilized world does not allow the end to be hastened in relief of pain even when there is no hope of recovery. A man's conscience never justifies his doing what he feels to be wrong. Action which is evil in his own eyes will inevitably be accompanied with self-reproach.

It has been the fashion among certain travelers to deny that some of the tribes they visited had any sense of conscience; a statement similar to their denial of a universal religious sense

[11] Quoted by Illingworth, *Personality, Human and Divine,* p. 109.

which has been discussed in a previous chapter. Bishop Callaway describes the difficulty he had among the Zulus of speaking of conscience, for he could find no word in their language to correspond to it. Yet he did not rashly conclude that they had no moral sense. By persistent investigation he discovered an equivalent term which served perfectly to convey his idea.[12]

Casalis gives us much information on the moral ideas of the Basutos before their contact with Christian civilization. They are expressed in an original and lively fashion in their proverbs. "Cunning devours its master," "There is blood in the dregs," "The thief catches himself," "Stolen goods cannot grow," "Human blood is heavy, it prevents him who has shed it from running away," "If a man has been killed secretly, the straws of the fields will tell it," "A good name gives good sleep." On the occasion of the rite of circumcision, the young Basuto is addressed thus: "Amend your ways! Be a man! Fear theft! Fear adultery! Honor your parents! Obey your chiefs!"[13]

Howitt was initiated into the mysteries of the Australian savages, which are kept a profound secret from the white men. At the initiation the Australian youth is taught to believe in Darumulun, the great spirit whose name is never mentioned at other times, but who is commonly called Master and Father. Each lad is given by one of the elders advice so kindly, fatherly, and impressive as often to soften the heart and draw tears from the youth. Some of the rules given him at that time are to obey the old, to share with and live peaceably with all their friends, not to interfere with girls or married women, and to obey the food restrictions.

Thus, to quote Robertson Smith, "we see that even in its rudest forms religion was a moral force; the powers that man reveres were on the side of social order and tribal law; and the fear of the gods was a motive to enforce the laws of society, which were also the laws of morality."[14] Different races and

[12] See Wordsworth, *The One Religion*, pp. 354, 5.
[13] *The Basutos*, pp. 263, 4, 307–311.
[14] *Religion of the Semites*, p. 53.

different ages do vary as to concrete cases of duty according to their ethical light, but they do not differ in the inner feeling of oughtness, the obligation to do the thing which to them seems right.

We have in our own day many examples of a development of moral opinion. Slavery was at one time universally considered as sanctioned by God. Even after the movement against it began many good men argued for it, calling on the Bible to support their claims, yet years later they admitted their mistake. The Bible has not changed, but its principles are every decade being given wider application. The same gradual growth of moral opinion is seen in the suppression of lotteries and gambling. Many countries today have yet to reach this point. The Greek Fathers were wiser than some of the theologians up to our own day. Gregory of Nazianzus tells us that God in His progressive revelation dealt with the Jews as a schoolmaster. Chrysostom thinks that the merit of the New Testament is that it has taught us to condemn as wrong much that the Old Testament tolerated, and urges that we must not look at the bare facts only, but must study also with care and attention the period in which they happened, the causes and motives of them, and the difference between the persons acting. Basil has the suggestive thought that God deals with us as men reared in darkness, and only gradually accustoms us to brighter light.

The moral instincts which create and rule society are not its product, but rather the formative forces within it, growing with its growth. They do not spring out of the environment nor from any conscious will of men, they are imposed upon our deepest nature by a higher Power working within. They all witness to the spiritual environment in which our finite spirits live and move, and they are visions of what God would have us will and do. The social order is the expression of the underlying moral order of the heart. We may claim history as testifying to the view that some recognition of God and of man's spiritual being is indispensable to the survival in the long run of ethical instincts. Conscience is the peculiar form of

consciousness concerned with the relations between persons. The word is striking in its implication of a certain mutuality of knowledge between men, and also between God and men in moral principles. It is the clear intuition of duty which arises when a man stands face to face with a hard obligation, and recognizes in the still, small voice an authority which he cannot gainsay; for it is the mystery of conscience that it proclaims a law independent of man's will, even condemning it, yet which he feels to be not arbitrary, but the expression of his higher being.

Conscience is hard to define for accurate scientific use because it is so widely used to signify any or all exercise of mind concerning the morality of an action. Calderwood says that "conscience is that power of mind by which moral law is discovered to each individual for the guidance of his conduct," [15] and Noah K. Davis also speaks of the function of conscience to discern the moral law. "The intuitive cognition of this fundamental, catholic, and universal law, is the sole function of the pure practical reason or conscience. Conscience is pure reason discerning moral law. This faculty has the moral law for its exclusive object, and its exercise is the primary, original, antecedent condition of any moral activity whatever, without which liberty has no moral restraint, and volition no moral character." [16]

Kant and Butler give to conscience the function of passing judgment as well. Kant tells us that "Conscience is man's practical reason, which holds before him his law of duty in every case so as either to acquit or condemn him." [17] It is concerned with will and action, whereas the pure reason thinks and argues, classifies and speculates. Butler similarly holds it to be "the principle in man, by which he approves or disapproves his heart, temper, and actions." [18] Butler's phrase, "the supremacy of conscience," is not clear. It should be the

[15] *Handbook of Moral Philosophy,* Pt. I, Div. I, Ch. 4, § 1.
[16] *Elements of Ethics,* p. 77.
[17] *Introduction to Metaphysical Elements of Ethics,* XII, (B). See Note M.
[18] Sermon I.

felt supremacy and authority of the law to which moral consciousness bears clear witness. This distinction explains the common phrases of a good and a bad conscience. If conscience always reveals the right, how can it ever be bad? A good conscience is a consciousness of a plain duty plus the good will to do it. An evil conscience is a consciousness of duty plus an evil will refusing to do it. Kant's dictum "There is no such thing as an erring conscience," [19] is true in the sense that every man is bound to do that which his conscience bids him do. But his moral sense grows by obedience to what seems right to him, and can be trained to a truer perception of what is right and wrong, just as the eye, which sees by nature, can be trained to delicacy of taste in color and form, or the ear, which does not need to be shown how to hear, can be educated to an appreciation of harmony and tone.

A law of duty is a statement not of that which *must* happen, but of that which *ought* to happen. It is a revelation of the relations which personal beings know ought to prevail between them as the ideal end of their being. But that ideal is not realized; it finds imperfect obedience at best, and often open rebellion. Still no rebellion can shake the deep feeling that the law ought to be obeyed. Even the sinner knows that the law is just and holy. There is a half truth in Satan's words: "Ye shall be as God, knowing good and evil." [20] We do know good by contrast with evil, and sin reveals our power of independent action against our known duty.

This feeling or recognition of an authority within us that has the right to rebuke us is absolutely unique. We do not recognize it in relation to any physical forces, for we may defy them, or to any physical object, though it may be as great as the solar system. We may fear such, but we do not reverence them. We do not feel anything like it in relation to other human personalities. We resent control by other men, and dislike to receive orders from them. But the moral law has a

[19] Introduction to *Metaphysical Elements of Ethics,* XII, (B). Abbott, p. 311.

[20] Gen. 3:5.

strange authority which commands without constraining, and ordains without humiliation, and whose noble prerogative it is that obedience to its law glorifies the will which obeys it. *Cui servire est regnare,* "Whose service is perfect freedom"; [21] but *qui sibi servit servo,* who serves himself serves a slave.

Closely connected with this personal element in justice is the recognition of and acquiescence in punishment when just — a feeling so strong that criminals often submit voluntarily to punishment when not detected, as a means of atoning for the fault and attaining peace. The very essence of punishment, as distinct from consequences, is the element of conscious intention in fitting the penalty to the crime. It is an act of personal will, acting avowedly with a purpose to punish. Justice is not felt to be done if by some accident, and not by law, a criminal suffers. A condemned murderer is not "punished" for his crime, if he should be mistaken for some other man by a mob, and hung for a crime he did not commit. The same testimony to the divine origin of conscience is shown in the peculiar feeling of shame or self-contempt for having offended against a Person who knows us through and through. Conscience is always something more than a personal feeling or wholly private experience. It is always directed to another Person and connected with universal relations.

Men all the world over have ever recognized standards of right and wrong as rooting in a supreme Lawgiver, whose law of duty and life is divine and somehow one with our own. It is not because we believe in social morals between man and man, but because we feel that there is an eternal basis of all duty, that we must believe in a God, who is at once supreme goodness and supreme justice, both love and law. In Flint's vigorous words: "Conscience claims to rule my will in virtue of a law which cannot be the expression of my will, and which cannot be anything else than the expression of another will; one often in antagonism to mine — one always better than mine

[21] As translated in the *Collect for Peace.*

— one which demands from me an unvarying and complete obedience. It comes to me and speaks to me in defiance of my will; when my will is set against hearing it, and still more against obeying it; when my will is bent on stifling and drowning its voice. It warns, threatens, condemns, and punishes me, against my will, and with a voice of authority as the delegate or deputy of a perfectly good and holy will which has an absolute right to rule over me, to control and sway all my faculties; which searches and knows me; which besets me behind and before. Whose is this perfect, authoritative, supreme will, to which all consciences, even the most erring, point back? Whose, if not God's?" [22] The answer comes in the feeling which finds expression in the confession of sin in all ages, "Against Thee (O Lord), Thee only, have I sinned, and done that which is evil in Thy sight." [23]

Martineau, who bears testimony to the divine authority of the moral law, unfortunately represents God as wholly transcendent. "The Moral Law," he concludes his discussion, "is imposed by an authority foreign to our personality, and is open, not to be canvassed, but only to be obeyed or disobeyed." [24] This sentence denies the divine immanence by the indwelling of the Holy Spirit. Rather is the moral law the very expression of our being, and proclaims our kinship to God. Moral character belongs to the very essence of human nature which at its root and center is good, as appears in the fact that even the sinner recognizes the moral law as good, and assents to it in his deeper being. "But if what I would not, that I do, I consent unto the law that it is good." [25] There is an element of mystery in the source and aim of man's moral impulses. So little have they to do with his calculating intellect that Benjamin Kidd and others call them irrational. We protest that they are a higher kind of reason which bids a man live for others and sacrifice self. As we have said, the moral instincts which

[22] *Theism*, p. 219.
[23] Ps. 51:4.
[24] *A Study of Religion*, Vol. II, p. 6.
[25] Rom. 7:16.

rule the world are not the product of social evolution, but rather the directing forces of it.[26]

Some thinkers like Fichte, Carlyle, and Matthew Arnold deny that ethical character depends absolutely on personality. They believe there is a universal order, making for righteousness, but it need not be personal. We reply that for the normal mind goodness implies self-consciousness, and moral life is inconceivable apart from personality. The personal character of all moral life is intense. The sense of obligation is as inherent a quality in personality as gravitation is in particles of matter. However, while matter must obey its divine law, man is free to disobey to his own great loss and the injury of others. Kant tells us that "the idea of the moral law alone, with the respect inseparable from it, cannot properly be called a *capacity* belonging to personality, it is personality itself (the idea of humanity) considered altogether intellectually."[27] In another place he says that "reverence is due only between persons."[28] His famous passage on duty makes clear that personality has as its essence moral character. "*Duty!* Thou sublime and mighty name that dost embrace nothing charming or insinuating, but requirest submission, and yet seekest not to move the will by threatening aught that would arouse natural aversion or terror, but merely holdest forth a law which of itself finds entrance into the mind, and yet gains reluctant reverence (though not always obedience), a law before which all inclinations are dumb, even though they secretly counter-work it; what origin is there worthy of thee, and where is to be found the root of thy noble descent which proudly rejects all kindred with the inclinations; a root to be derived from which is the indispensable condition of the only worth which men can give themselves?

"It can be nothing less than a power which elevates man above himself (as a part of the world of sense), a power which

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[26] See Chap. XIX for fuller treatment.

[27] *Philosophical Theory of Religion*, Pt. I, Ch. 1, § 3. Abbott's translation, p. 334.

[28] *Practical Reason*, Pt. I, Bk. I, Ch. 3, Abbott's translation, p. 169.

connects him with an order of things that only the understanding can conceive, with a world which at the same time commands the whole sensible world. . . . This power is nothing but *personality,* that is, freedom and independence of the mechanism of nature, yet, regarded also as a faculty of a being which is subject to special laws, namely, pure practical laws given by its own reason; so that the person as belonging to the sensible world is subject to his own personality as belonging to the intelligible [super-sensible] world. It is not to be wondered at that man, as belonging to both worlds, must regard his own nature in reference to its second and highest characteristic only with reverence, and its laws with the highest respect." [29]

To sum up: It is the essence, the central element, in moral consciousness to believe that goodness, truth, love, and righteousness are not mere brute instincts or social utilities, customs and maxims founded in self-interest, public and private. They must have an external basis in the very nature of the spiritual, *i.e.,* the personal world. They are reflections in the mirror of our hearts of an ethical order, which itself roots and springs out of an Ethical and Infinite Person, the law of whose Life is somehow the law of our being also, even though we dare to break it. This is the best argument for our age, which has noble aspirations and high ethical ideals. It is the most convincing argument to those to whom it appeals, but even more than the rational argument, it demands an open heart, a willingness to listen, and a desire for the truth. It depends for its influence on the conscience being awake, on the attitude which individual men hold to their known duty, and on their will to do the right.

The Denial of Divine Benevolence

The doubt of God's goodness in the moral government of the world, which is caused by the commonness of pain and misery, needs a few words of discussion. But certain limita-

[29] *Ibid.,* Abbott's translation, p. 180.

tions must be set to keep the question within bounds. Two kinds or classes of pain cannot be here considered. Human suffering must be treated by itself as being involved by the solidarity of the race in the consequences, physical and moral, of sin. This aspect of theodicy belongs to Christian theology. Again we must rule out all animal suffering due to man, for which the divine order is not responsible. We have a certain amount of obligation to animals which has been well expressed by Davidson: "Treat the animal in such a manner as you would willingly be treated, were you such an animal." So the question narrows itself down to animal pain due to the working of the world order and the relations of the animals to each other.

It has been objected that if God has the perfect moral character which the argument just treated shows Him to have, He would not permit the world to be so full of pain and suffering as it is. If He is loving and all-powerful and all-knowing, why did He build the world on cruel lines? These objections were never more bitter than they are now, but they are as old as speculative thought. Epicurus stated his view of the difficulty in the form of a trilemma. (1) God is able, but not willing to prevent pain — then He is not good: (2) He is willing, but not able — then He is not omnipotent; (3) He is neither able nor willing — then He is indifferent.

The modern sympathetic spirit of humanity, Christian in origin, has greatly intensified the difficulty, and extended it to cover the animal world. Not only poets and philanthropists, but men of science often make it the ground for questioning either the divine goodness or omnipotence. J. S. Mill in an indictment of nature, which is more emotional and imaginative than a logician and scientist should be guilty of, accepts the second part of Epicurus' trilemma. God is willing, but not able, to prevent pain. Thus we have a revival of Manichæan Gnosticism; God is limited by the material He works in.

Romanes, in his negative period of thought, was typical of this group of scientists who impugn divine goodness, and none have exceeded him in the severity of his attack: "Supposing

the Deity to be, what Professor Flint maintains that he is — viz., omnipotent, and there can be no inference more transparent than that such wholesale suffering, for whatever ends designed, exhibits an incalculably greater deficiency of beneficence in the divine character than that which we know in any, the very worst, of human characters. For let us pause for one moment to think of what suffering in Nature means. Some hundreds of millions of years ago some millions of millions of animals must be supposed to have become sentient. Since that time till the present, there must have been millions and millions of generations of millions and millions of individuals. And throughout all this period of incalculable duration, this inconceivable host of sentient organisms have been in a state of unceasing battle, dread, ravin, pain. Looking to the outcome, we find that more than one-half of the species which have survived the ceaseless struggle are parasitic in their habits, lower and insentient forms of life feasting on higher and sentient forms; we find teeth and talons whetted for slaughter, hooks and suckers molded for torture — everywhere a reign of terror, hunger, sickness, with oozing blood and quivering limbs, with gasping breath and eyes of innocence that dimly close in deaths of cruel torture. . . . If we see a rabbit panting in the iron jaws of a spring trap, and in consequence abhor the devilish nature of the being who, with full powers of realizing what pain means, can deliberately employ his whole faculties of invention in contriving a thing so hideously cruel; what are we to think of a Being who, with yet higher faculties of thought and knowledge, and with an unlimited choice of means to secure His ends, has contrived untold thousands of mechanisms no less diabolical? In short, so far as Nature can teach us, or 'observation can extend,' it does appear that the scheme, if it is a scheme, is the product of a Mind which differs from the more highly evolved type of human mind in that it is immensely more intellectual without being nearly so moral." [30]

[30] *Thoughts on Religion,* pp. 81–83.

There are three ways in which Romanes has erred in his indictment. (1) He ignores the fact that animals are non-moral, and therefore cannot commit the many "sins" of which he accuses them, all implying deliberation and intention. (2) The difficulty is largely of his own making as the result of his sympathetic imagination. All the phrases he uses describe men, not animals; for they are interpretations of animal life in terms of human experience, as if they had states of self-consciousness which are beyond their possible knowledge. We have no words in which to express the semi-conscious life of animals. We cannot help using terms expressing agony and terror which it is certain they seldom experience. (3) We must recognize the fact that multitudes of creatures serve as food for higher forms — how else should these live? Man is inconsistent in inveighing against nature's ways as long as he himself lives on the flesh of animals. Death is indispensable. If they did not quickly die after vigorous life, the lower forms would soon fill the earth. The parasites to which Romanes refers are not so terrible as he represents, for they feed on the fat and avoid the sensitive organs of the creatures to which they attach themselves. In these and similar ways Mill, Huxley,[31] and others have been wrong in their indictments.

All pain cannot be included in their indictment of nature, for both in animals and man pain is often a means to good, nature's danger signal. As Le Conte expresses it, pains are sentinels on guard. Every animal appetite springs out of a want, which causes pain if it is not gratified as, for instance, hunger or thirst. Every sense and faculty is so constituted as to be in certain circumstances the seat of pain. It is manifest that pain is needed to warn animals not to misuse their bodies so as possibly to destroy them. Intense pain is abnormal and results from misuse. No organ was ever made to give pain, but every organ, being delicate and sensitive, will by pain quickly protest against neglect and rough treatment. Teeth were made for eating, not for aching; the pain is an incident,

[31] *The Nineteenth Century*, Feb. 1888.

not an end. Anatomists have never discovered an organ calculated to produce pain and disease. They never tell us that the function of this particular nerve is to irritate, or that duct to carry gravel to the kidneys, or that gland to secrete the acid which causes gout. These are all diseased and abnormal conditions. Man is the only being who has ever constructed instruments of torture for the very purpose of giving pain.

The amount of pain felt by wild animals is grossly exaggerated. Shakespeare has the fancy that when a beetle is crushed it "finds a pang as great as when a giant dies."[32] This is an honor to his heart, but there is no foundation in nature for it. The degree of pain each animal suffers is determined by the grade of its nervous organization. Plants suffer no pain. Low forms of life, like fishes and insects, have a very simple nervous system and show no signs of pain. A fish does not suffer from the hook as much as some suppose. If a bee is cut in half as it sucks a flower, it will keep on sucking. Rats will bite their own legs off if caught in traps. It is impossible to judge of the degree of pain by the contortions of animals, for it is mostly reflex nervous action, like the motions of an epileptic fit. We observe the sufferings of our domestic animals, but they are not as acute as our own. We forget that animals in the state of nature suffer little, and are free from some of our painful diseases. When not devoured for prey, they die painless deaths of old age, or cold, or hunger. Even in the case of human beings few die in full possession of their mental faculties. Most seem to be in a sort of stupor at the last.

Idiots, who live a purely animal life, show at times utter insensibility to what would seem agonizing pain to us. They have been known to watch surgical operations performed on themselves with no more sign of pain than if it were being done to another.

The present intensity of feeling about the matter is due to

[32] *Measure for Measure,* Act III, Sc. 1.

the emphasis laid on animal suffering and death by the Darwinian theory of the struggle for existence. Our sympathetic imagination pictures the earth as an unceasing field of carnage and pain. But even on a human battle field the mass of the wounded suffer little pain in the excitement of the battle, until the blood cools and they lie long unattended. The analogy is a misleading one and fails in this very point, that the animal seized for prey is not wounded and left unattended, it is quickly killed and probably suffers little pain.

There is human evidence to show that the victims are almost certainly frightened or hypnotized to such a degree that they may feel no pain at all. Fear inhibits the nerve reactions which would normally cause pain. David Livingstone has told how it felt to be seized by a lion. Growling horribly near his ear, the lion shook him as a terrier dog shakes a rat. The shock produced a stupor like that which seems to be felt by a mouse after the first shake by a cat. He was in a sort of dreamy state in which there was no pain or terror, though he was conscious all the time. The strong shake destroyed fear and any horror at the beast itself. Sir Edward Bradford, an English officer in India, was seized in the jungle by a tiger which held him down firmly and deliberately devoured the whole of one arm, beginning at the hand. He was positive that he felt no fear, and no pain, save when his hand was bitten through. Rustem Pasha, once Turkish ambassador at London, was attacked by a bear which tore off his arm and part of his shoulder. He was not conscious of any suffering, but was excessively angry at the bear's satisfaction in eating his arm. Thus nature seems to provide her own narcotic. Further, absence of pain seems produced by an accident in which the person is perfectly helpless. Mr. Whymper fell several hundred feet in the Alps, bounding from rock to rock, yet he neither lost consciousness nor suffered the slightest pain, though he was terribly bruised. Severe operations have been performed on patients under hypnotic influence without their feeling any pain. If animals eaten as prey are hypnotized through fear they would probably not feel pain. Thus it can be seen how

much sentimental exaggeration has come into our view of the struggle for existence.

Naturalists who have lived in the woods among animals and watched their ways in the natural state, such as Audubon, Wallace, Maurice Thompson, Burroughs, etc., all believe that their life predominates with keen enjoyment. Sir John Lubbock says that the pleasures of life are greater than its pains. Darwin writes: "When we reflect on the struggle for existence, we may console ourselves with the full belief that the warfare of nature is not incessant, that no fear of pain or death is felt beforehand, the imagination being absent, that death is generally prompt and painless, that the vigorous, the healthy and the happy survive and multiply." Poets and lovers of nature in the large, who do not lose sight of the whole, as scientists often do, are not troubled by thoughts of God's indifference.

There are evidences that had Romanes lived to write his *Candid Examination of Religion* (of which the *Notes* that he left testify how great a loss his death has caused us), he would have largely reversed his earlier indictment of the benevolence of God. To quote the editor of his suggestive *Notes*, Bishop Gore: "It is probable that Romanes felt the difficulty arising from the cruelty of nature less, as he was led to dwell more on humanity as the most important part of nature, and perceived the function of suffering in the economy of human life: and also as he became more impressed with the positive evidences for Christianity as at once the religion of sorrow and the revelation of God as Love. The Christian Faith supplies believers not only with an argument against pessimism from general results, but also with such an insight into the Divine character and method as enables them at least to bear hopefully the awful perplexities which arise from the spectacle of individuals suffering." [33]

Suffering is involved in the constitution of the world as a great system under general laws. It is vital for the good of

[33] *Thoughts on Religion*, p. 101.

the whole. It is better that the individual should suffer than that this order should be broken. From the Christian, as distinct from the naturalistic standpoint, we may look on nature's demand for sacrifice, and on death as the condition of life, as a sacrament of the divine law of love revealed on Calvary.

(We consider here only the rational form of Ethical Theism; its intuitive aspect will be treated under Ethical Ontology.)

CHAPTER VIII

THE WITNESS OF THE BEAUTIFUL AND THE SUBLIME

This very recent line of thought would seem at first to belong to the Eutaxiological Argument. But the impression beauty makes on us is a spontaneous feeling rather than a logical inference, and it suggests at once more than Mind as its cause. It can readily stand by itself as a fitting transition between the Witness of the Intellect, which has just been treated, and the Witness of the Spirit (the Ontological Argument), which is to follow. As beauty has no other purpose than the giving of pure pleasure, it raises in devout minds the thought of the divine goodness as desiring to fill our hearts with gladness.

Kant was the first philosopher who studied this argument for God. He associated the appreciation of beauty with the practical, not with the theoretical, reason, for as he pointed out the logical element is notably absent. The admiration for beautiful things and the emotions aroused by the manifold purposes and harmonies of nature have something akin to religious feeling. By action analogous to moral agencies they produce in us feelings of joy and gratitude toward the unknown Cause of all things. He called natural beauty "the form of the Good."

Nature's beauty and sublimity were fully recognized by the Jews. The spirit of rejoicing faith in the living God as near to the world and sustaining it from moment to moment, filled the heart of psalmist and prophet, inspiring outbursts of exulting praise to the God of nature, such as the pagan world at its highest never knew. Of many instances the 104th Psalm can stand as typical. It is given in Bishop Alexander's paraphrase.

Bless the Lord, O my soul!
  O Lord, my God!
Very great hast Thou been.
  Splendor and majesty
Thou hast put on as a robe,
Thou hast arrayed Thee with light
  For Thy lucent vesture of wear,
Outspreading the heavens on heavens
  As the tremulous veil of a curtain.
— He who archeth and layeth the beams
  Of his lofty chamber of Presence
  On the floor of the waters above.
  — Who setteth the clouds
  Thick-encompassing, dense,
For the battle-car of His march.
— Who walketh on wings of the wind,
  Who maketh His angels
As swift as the sweep of the storm-winds,
  As strong as the flame of the fire.

Thou hast built up the marvelous building
  Of earth on foundations that shall not
    Be shaken for ever and aye:
Thou didst mantle it once with the deep,
  Sheer up o'er the hills stood the waters,
— They recoil'd because Thou didst chide them.
From the crashing voice of Thy thunder
    They trembled and hasted away;
      Ascended the mountains,
      Descended the valleys,
To the place Thou hadst founded for them:
  The line of their border Thou settest
Which their proud waves must never pass o'er;
  Must never return in their anger,
  To mantle the wide earth again.

Thou sendest in freedom away
  The bright springs into the river;
In the glens, the mountains between,
  They walk for ever and aye . . .
  The happy trees of the Lord
Stand satisfied, even the cedars
Lebanonian, planted by Him;
There the chirping birds build their nests;

But the good and home-loving stork —
Her house the cypresses are.
The mountains, earth's high ones, uplifted
Are there for the wild goats to climb,
And the crags are a refuge for conies.

He make the wan yellow moon
To mark the vespers for aye
Of the times as they come in their order.
And the bright sun, that knowest so well
His unfailing succession of sunsets:
Thou settest the darkness. Comes night,
And in it will creep
All the teeming life of the thicket.
The young lions roar for their prey,
And seek for their food from their God.
Breaks forth at his bright birth the sun.
They gather and muster themselves,
And in their lairs they crouch down.
Man goes forth to his work,
To his service until the evening.

How many Thy works — O Jehovah!
In wisdom all of them made.
The earth is full to the utmost
Of an ample possession of Thine. . . .
Hush'd in expectance all these
Look forth and wait upon Thee.
To give them their food in its season;
And ever Thou givest it freely:
Thou openest Divinely Thy Hand —
They are satisfied fully with good!
But when Thou hidest Thy face,
They are troubled, and restlessly shudder.
Their spirits Thou gatherest in,
They breathe out the breath of their life,
And unto their dust will return.
— Thou wilt send forth
In solemn procession Thy Spirit,
And the work of creation will grow,
And Thou wilt make young and renew
The sorrow-worn face of the earth.

His glory shall be through the ages,
The Lord shall be glad in His works.

If He do but look on the earth,
It trembles exceedingly sore.
If He touch the mountains, they smoke.
I will sing to the Lord in my life.
I will lift up Psalms to my God
While my soul can call itself *I*.
My thought shall be sweet in His sight.
I will be glad in the Lord.
From this fair earth the sinner shall cease,
And yet in the space of the years
The wicked shall not be there.
Bless the Lord, O my soul![1]

In Greek thought nature and God were interchangeable terms, and we find no hint of any creation proper. But in the view of the Old Testament writers God was wholly distinct from nature. Back of the visible nature process is a Person who knows and wills the universe. Nature is creatural, out and out, and her every aspect is in submission to God's omnipotent will. God is Maker and Master of the whole physical order, consequently Nature becomes a symbol. Christianity deepened and clarified self-consciousness and set the spirit free from the control of the visible world, of which the Greek thought himself a helpless part. Thus there is a vast difference between the Greek and the modern Christian, the former counted himself a mere portion of living nature, while the latter looking upward feels himself the master and crown of the world. The point of difference between the Greeks and ourselves is best expressed by saying that for them Nature was more a substance than a symbol, while to us it is a symbol rather than a substance. Anything in nature becomes a symbol when it arouses an intensity of feeling that robs it of its mere material existence, and transmutes it into a means of expression and suggestion of holy things. In pre-Socratic days the problem of mind had not emerged. Self-consciousness was absorbed in nature, and nature was largely its own maker and self-contained. Later there arose the highest

[1] *The Witness of the Psalms.* Supplement, pp. 376–80.

thought the mind of man can form — the discovery of personality, a thought due especially to the Gospel's teaching of the innate dignity of man as man. With the revelation of spirit in man arose the kindred faith in the Spirit of God as back of the physical order, its inner source and support, working within it, as well as without. In other words, the thought of the divine immanence, so illuminating to us, but utterly foreign to the old Greek mind, is the real source of the occidental nature sense.

The Greeks had the deepest sense of physical beauty. It was a very passion, inborn and almost a religion. Their creations in architecture, in painting and sculpture have never been excelled. They appreciated moral beauty, though their morality itself was low in certain relations. They also anticipated Kant's thought that beauty is the form of the Good, but the sentiment of beauty in nature, the sense of the picturesque, is curiously lacking in classical literature, though occasionally we do find instances of the appreciation of the sublime. However, after the advent of Christianity, the Greek theologians show evidences of our modern nature sense, and their spirit of devout delight in nature's beauty and harmony as witnessing to God, found expression in the liturgy and hymns of the Eastern Church. But until lately this element of praise has been altogether lacking in our own worship.

Mediæval thought in the West tended to separate the world of faith from that of things, which was under the curse of Adam, and the theological mind in every age has been too intellectual to appreciate the mystical and symbolic side of nature. This line of evidence has been slow to find an entrance into theological writings. Martineau makes no reference to arguments from beauty in his *Study of Religion,* but Armstrong tells us that in 1897 he asked him with some tremor, whether we were not justified in building on the foundation of the sense of beauty, through which man recognizes God as Love. Martineau's reply was a wonderfully cordial and unqualified assent. He added that he considered the argument qualified

to rank in importance, and to be coordinated with his two arguments founded on Causality and on Conscience.[2]

The sense of the picturesque as a general trait is modern, beginning with the Lake Poets in England and the Romanticists on the Continent. But the Puritan mistrust of beauty still lingers in some quarters, as though beautiful things were somehow unholy and a snare for the unwary, for was not the tree that tempted Eve "pleasant to the eyes"? The abuse of a good gift of God does not take away its right use. If the Preacher of old could say, "God made everything beautiful in its time,"[3] then certainly there can be no divinely intended antagonism between beauty and faith, nor any ordained connection between ugliness and goodness.

The beautiful and the useful are sharply distinct. There may be adaptations of nature to our physical needs without any awareness on our part, but beauty exists only in and for our own consciousness. We must feel it, or it has no existence at all. It is, moreover, a purely personal possession. It is an immediate experience, and not transferable to another. We can no more convey our delight in a beautiful scene to one who is indifferent to such impressions than we can give sight to the sightless. Illingworth points out the spiritual value of sense impressions: "Atoms and their properties, as revealed by science, are not more real than the sensible impressions which they create in all normally constituted persons: while these impressions which profoundly touch the feelings, and modify the conduct of innumerable men, may even be called more real, in the only intelligible sense of the word, than their mechanical causes, known only to a small minority of the race. Take the sunset for example — a series of ethereal vibrations, merely mechanical in origin, and, as such, other than they seem; whose total effect is to create in us an optical illusion, making the sun, and not the earth, appear to move. Yet, as men watch its appearance, thoughts and feelings arise in their hearts, that move their being in unnumbered ways.

[2] See Caldecott, *Philosophy of Religion*, p. 351.
[3] Ecc. 3:11.

Youth is fired with high ideals; age consoled with peaceful hopes; saints, as they pray, see heaven opened; sinners feel conscience strangely stirred. Mourners are comforted; weary ones rested; artists inspired; lovers united; worldlings purified and softened as they gaze. In a short half-hour all is over; the mechanical process has come to an end; the gold has melted into gray. But countless souls, meanwhile, have been soothed, and solaced, and uplifted by that evening benediction from the far off sky; and the course of human life today is modified and molded by the setting of yesterday's sun. In the same way, a piece of music, a sonata or a symphony, is more real to its audience than the acoustic laws which cause it, or the instruments upon which it is performed. The world of science, in other words, is no more real than the world of feeling; the two being only different aspects of one continuous whole, of which the human organism is also a part. It follows that we have no ground whatever for discounting the religious influence of external nature, as less real than the mechanical phenomena, on which physically speaking it depends, and of which, in fact, it may be called a manifestation. The two things impress different faculties in us, but with equal justification." [4]

When the materialist has exhausted his ingenuity in efforts to prove that utility, the body's good, is the key to all nature, its very end and aim, this peculiar sense of beauty rises up suddenly as a confounding something, utterly out of place in a purely mechanical world, where man, like all other animals, should live by bread alone, desiring and expecting nothing more. The theory of evolution, the modern "open sesame" of all mysteries, fails us here. Darwin felt this difficulty and admitted his perplexity as to the "use" of beauty. He sought to bring it within the utilitarian formula of evolution by the hypothesis of sexual selection, and the more certain fertilization by insects of the brightly colored flowers. But both suggestions concern only a small section of the world

[4] *Divine Immanence,* pp. 65–67.

of beauty. Wallace is certain that the emotions excited by colors and forms in nature raise us above the level of a world developed on purely utilitarian principles.[5]

The Duke of Argyll writes of the gorgeous coloring of the humming birds and asks: "Now, what explanation does the law of Natural Selection give — I will not say of the origin, but even of the continuance and preservation — of such specific varieties as these? None whatever. A crest of topaz is no better in the struggle for existence than a crest of sapphire. A frill ending in spangles of the emerald is no better in the battle of life than a frill ending in the spangles of the ruby. A tail is not affected for the purposes of flight, whether its marginal or its central feathers are decorated with white. It is impossible to bring such varieties into relation with any physical law known to us. It has relation, however, to a Purpose, which stands in close analogy with our own knowledge of Purpose in the works of Man. Mere beauty and mere variety, for their own sake, are objects which we ourselves seek when we can make the forces of Nature subordinate to the attainment of them. There seems to be no conceivable reason why we should doubt or question, that these are ends and aims also in the forms given to living organisms, when the facts correspond with this view, and with no other." Or in the words of Gould, which Argyll quotes with approval: "My own opinion is, that this gorgeous coloring of the humming birds has been given for the mere purpose of ornament, and for no other purpose of special adaptation in their mode of life; in other words, that ornament and beauty, merely as such, was the end proposed."[6] Smyth gives the problem its spiritual interpretation thus: "What then is the full and sufficient interpretation of the beautiful in nature? What does natural evolution signify? We answer: It is from reason and for reason. It is expression of reason to reason. It is revelation of the In-

[5] See *The World of Life,* pp. 340–49. He holds that colors and markings on animals and plants are only partially explainable as "recognition marks."

[6] *Reign of Law,* pp. 234, 5 and 231.

telligence that thinks it and loves it, to the mind in us which may perceive it and delight in it. This, and nothing else, is its message and its meaning. Our sciences may trace the laws of its unfolding; our biology to a certain extent may find the method of its evolution. But beauty is a perpetual revelation of intelligence to intelligence. The principle of beauty, wrought into the elements of nature, is one of the ruling ideas of the world. The tendency of nature everywhere to break forth and to blossom into beauty, is one of the leading characters of evolution which indicates its rational and moral direction." [7]

The sense of beauty, therefore, witnesses directly to the loving kindness of the Lord, Who has given to certain combinations of matter in varying form and color the strange power of evoking pure delight and inspiring uplifting thoughts in minds at peace with themselves and the world. The law of the sufficient reason justifies our arguing from the distinctively human trait of joy to belief in a similar quality in our Maker. This argument is just as valid as that from contrivance in nature to mind and plan in God. The love of beauty for its own sake is as real, though not so strong, a trait of mankind as utilitarian design. The cave-men, who used stone implements with which to work or fight, engraved the ivory and bone handles with a true, though undeveloped, sense of art. Is it likely that so universal a characteristic of the mind of man should have no counterpart at all in the mind of God? "He that hath formed the eye, shall He not see?" [8] He that gives to man the joyous sense of beauty, shall He be blind to it Himself? Is it not logical — if there be any correspondence between God and man — to cry with the Psalmist, "The Lord rejoices in His works" [9] and, therefore, means man to rejoice in them also? Hugh Miller, even before the days of evolution, wrote in striking words of the fossil forms. He held that all the forms and shapes of beauty in early geologic ages, which

[7] *Through Science to Faith*, p. 154.
[8] Ps. 94:9.
[9] Ps. 104:31.

once filled all nature, were not created to satisfy man's love of the beautiful, for man had not yet appeared. They must have been called into being by the Creator in harmony with His own æsthetic taste — to use human terms.

When indeed we think how entirely unconscious Nature must be of her own beauty — the sea smiling in the sunlight with its myriad dimples, or the rounded hills, rolled in green, "asleep at noon in the summer heat,"— how even the living things, the bright-eyed squirrels, graceful in motion, the swift-winged swallows, flashing in the sunlight, the humming birds, those "living diadems" of sapphires and rubies,— all know nothing of the impression which they make on *us,* then we understand the Scripture reference of all things to God, and to man made in God's image. "He made the world, not in vain, but to be inhabited," [10] said the wise prophet. "All things are yours," said St. Paul, "and ye are Christ's, and Christ is God's." [11]

If massive mountains piercing the clouds, silent in their majesty, or the mighty swell of the boundless ocean, resistless in power, fill our hearts with awe; if the twilight sky with its depths of quivering light, glorious gold and tender rose, palest green and purest white, speak to our hearts of the peace and beauty of the Land Beyond; while the patient stars, undimmed by earth's tears, untouched by time's decay, bear nightly witness to the Eternal One, Who changes not and never wearies; if grassy valleys, jeweled with flowers, and the rustling fields of grain, bending in soft billows to the gentle breeze, whisper thoughts of the Providence of Him whose mercy is over all His works — in a word, if certain aspects of Nature excite in us certain moods, why should we not believe that this correspondence is divinely ordained? Christ's deep word, "Consider the lilies of the field," [12] is a broad command; it applies to all fair and beautiful things which the Lord has made — to the gentle violet and the ox-eyed daisies of our

[10] Isa. 45:18.
[11] I Cor. 3:23.
[12] Matt. 6:28.

fields, as well as to the golden amaranths and crimson anemones of the Galilean hillside; to the tall pines of Maine, no less than to the grand cedars of Lebanon. The Voice in the whirlwind taught Job: "The Lord hath divided a watercourse for the overflowing of waters, or a way for the lightning of the thunder, to cause it to rain on the earth, where no man is, on the wilderness, where there is no man, to satisfy the desolate and waste ground, and to cause the bud of the tender herb to spring forth." [13] His words are as true of the lonely cactus and its crimson bud in our western deserts as of the tender herb, growing unseen in the sandy wastes of Arabia, all alike bear witness to the eternal power and divinity of their Master. They are all manifestations of His wisdom, embodiments of His thought. Preachers of righteousness are they, in perfect obedience to the laws of beauty, teachers of faith to all who have minds to see, that a world of order presupposes an Ordainer, that any process of age-long evolution ending in such harmony and beauty, demands an intelligent Evolver, foreseeing the end from the beginning, and working consciously toward His own good purposes, patient because eternal — all proclaims to those who have souls to know and hearts to feel their message, that God is immanent in the Universe, which awes us by its mystery. It is the Father's House, a world over which, in its smallest, as in its greatest parts, there watches the constant care of the living God, Who calls the stars by their names, and appoints its bounds to the ocean, and yet forgets not the young ravens when they call upon Him; and Who sends the thunderstorms to fill the dry water-courses in the mountains; that they may satisfy the desolate thirst of the wilderness, and cause the tender herb to spring forth and bud! "Forever, O Lord, Thy word is settled in heaven. Thy faithfulness is unto all generations . . . all things continue this day according to Thine ordinances, for all are Thy servants. Unless Thy law had been my delight, I should have perished in my affliction." [14] That is the strength and consolation which

[13] Job 38:25.
[14] Ps. 119:89–92.

the study of Nature's order brought to the writer of the 119th Psalm, that wonderful meditation on the Law of God ruling in man and in nature, as the same thoughts did to Job in his mysterious overwhelming affliction. The calm, unbroken order manifested in the great world which they could see inspired them with power to trust their lives, even in darkness and trial, to its Maker whom they did not see, Who must care for the men whom He has created as His children, feeling, thinking, praying souls, crying aloud to the Father of their spirits for help and light. Even so, only more plainly, does Christ teach. "Are not two sparrows sold for a farthing? yet not one of them shall fall to the ground without your Father," [15] that is, not one is forgotten of its Maker. What an overwhelming saying, when once we take in all it means, is this, "If God so clothe the grass of the field, which today is, and tomorrow is cast into the oven, shall He not much more clothe you, O ye of little faith?" [16] This is the divinely revealed ground of intelligent trust in God, our value in His sight over the things which quickly perish, having their whole being in this world, made for a day. The Lord, whose mercy is over all His works, is loving to man, His child.

Besides the beauty of form and color there is the beauty of grandeur, the sentiment of the sublime, which is deeper and more intense. In the presence of vast masses of matter at rest, as in the silent mountains, or in the fierce turmoil of the thunder storm, or in the wild gale on the ocean, or when we yield to the solemn impression of the star-strown depths of space, we cannot avoid a feeling of awe, passing into the sense of the sublime. Mere dread of overwhelming force, as in a tornado or an earthquake, differs radically from sublimity, of which the ruling spirit is something akin to reverence, and which moves to worship, not to terror.

Even more than in the case of beauty, the things which we see arouse faith in the things we cannot see. Those great

[15] Matt. 10:29.
[16] Matt. 6:30.

masses of matter, or manifestations of force, or the sense of open space unlimited, taken alone could not evoke the feeling of awe which arises spontaneously in the heart. There must be some preestablished or inborn correspondence between our deeper nature and such grand scenes, a radical association between nature at its highest and our instinctive faith in that mighty Power, not physical but spiritual, on which we feel our dependence for very existence. The "something" which links these two diverse experiences may be expressed in the one word "infinity," which Kant used of the impression made upon him by the starry heavens in their vastness, and the moral law in the depths of his being, also infinite in extent of obligation.

The beautiful is restful and pleasing. The sublime is disturbing, it humbles us with thoughts too great for words of things transcendent. But here as elsewhere true humility brings exaltation. Man's reverent awe before the infinite brings a feeling of dignity, and elevates humanity in our person to a higher plane. Kant was the first to analyze this double experience. Our sense of weakness and awe in the felt realization of the Infinite and the Eternal exalts us, in that this very sense of almost oppressive sublimity makes the mind conscious of its own wide scope of knowledge and relations, of its "supersensible destination" and its superiority to nature as a mechanical system. Kant's analysis strengthens the view that the genesis of our Occidental nature sense is the logical expression of our feeling of individuality which the East lacks. Nor has the savage this sense of the sublime, for a man whose individuality is still merged in the tribe cannot possess it. It is solely the prerogative of the man who realizes his intense and inviolable personality.

A man standing on the edge of an awful gulf may lose his nerve and grow dizzy in so far as he is a thing of sense, but when the manhood in him sounds the rally of all his forces, he stands erect, fearless of the vastness which threatened his self-masterhood, and then, in truth, he feels the greatness of his manhood. Man confronts the infinite universe, well aware

of his physical insignificance, knowing that he is a reed shaken by the wind, that he can be crushed like a moth by its slightest force, but he feels and knows and wills, and therefore holds himself superior to all the mighty masses of creation.[17] To illustrate the great by the little, we may recall the anecdote of the true but mediocre artist who, standing before a masterpiece of painting, felt his own inferior powers, but yet exclaimed, "Thank God, I also am an artist." Even so the reverent thinker in the presence of the glory and grandeur of Nature embodying God's great thoughts, is moved to thankfulness that he also is spirit, able to appreciate the majesty of God's works which strike such deep chords in his nature. That we feel thus in the presence of Nature's vast spaces and mighty forces, is itself a proof of our spiritual being. Mere animals crouch in trembling dread before the convulsions of nature, man stands upright undismayed, and lifts his pæan of worship above the crashing conflict of the elements. The realization of his personality lifts him above himself into the felt presence of God, and he attains ease of heart and peace of mind.

A magnificent sunset after a storm, with dark cloud masses lurid in red and with pure golden light breaking through the rifts, combines the beautiful and the sublime. What is the power that holds the mind enthralled? Whence comes the sense of awe and of praise? Why is there no sense of solitude in those awful depths; no fear, but only joy in that sublime infinitude? Because of the conscious presence of more than sight perceives. That glorious sheen of light and color is but the clothing of a sphere of life into which we pierce and find no strangeness in it. We are no more alone, a sense of relationship to all that sphere contains invites us onward; it is a spiritual landscape, as it were, reflected in the heart's mirror within; it seems no dream, but a conscious reality of the Eternal World within the spirit.

Those scientists who have only a mechanical conception of nature feel no awe at the glory of the heavens, but only won-

[17] Cf. *Pascal's Thoughts,* Chap. II, § X.

der at the complexity of the world machine. No vast system of mere celestial machinery with gravitation as the one all sufficient working force, can fill with awe minds once disillusioned of "the pathetic fallacy of a personal God." The scientist of this type feels no reverence when he gazes on the multitudinous masses of the stars — he sees through the stage machinery! His human mind refuses to bow before any mere system of things in motion even though it seems infinite. But alas for the mind which can gaze out on the mighty sum of things in all their harmony and peace, and feel no whisper of the all sustaining presence of its Maker. Pure science — with man's spirit ignored — studying phenomena as simple facts appearing under mechanical laws, is fatal to the mystical sense. We understand fully that the physical investigator must work on this line; we only ask him at times to break loose from the tyranny of his special task with microscope or crucible, and gaze on nature as a whole from the normal human standpoint, that he may be touched by its glory, and become conscious of the Cosmos as a translucent veil half-concealing, half-revealing an eternal realm within and above it.

But the materialistic tendency is not the only nor the main obstacle to the recognition of God's revelation in the beautiful and the sublime. Even more urgent is the condition of a pure heart and a will set on good.

> "If peace be in the heart,
> The wildest winter storm is full of solemn beauty,
> The midnight lightning flash but shows the path of duty,
> Each living creature but tells some new and joyous story,
> The very stones and trees all catch a ray of glory,
> If peace be in the heart."

The keen sense of beauty does not carry with it a deep feeling of duty, because beauty belongs to the world of the senses, while duty roots in personality, out of touch with matter as such. The ancient Greeks enjoyed beauty purely on the sensuous side, and a world of art, of which they were the ideal representatives, has ever been tempted to rest content in the visible beauty alone and, living and exulting in the life of

sense, to worship the creature and forget the Creator. All experience bears witness how easily in such cases the artistic sensitiveness to physical beauty leads to physical degeneration. Great masters in the world of art, like great masters in the world of physical science, have ever been great personalities. But the rank and file of those who make the motto "Art for art's sake" alone their rule of life, are ever perilously near the precipice of immoral thought and act. The Puritans have some foundation for their mistrust of art, and St. Paul had lived in Corinth for two years when he wrote that stern indictment of the sins of those who worshiped the creation rather than the Creator, and proclaimed the just and self-consistent punishment of those sins in physical degradation.[18]

Men cannot always live by the senses alone, least of all the poet, whose prophetic vision must include in its wide range the deep things of man as well as the forms of nature. He must at times look into his own heart as well as into the hearts of others. But he does so reluctantly and shrinks from what it reveals. The inner strife, the strange discord between the higher and the lower self is an enigma, which he cannot solve because he does not will to solve it. Sin is a word which has no place in the vocabulary of pure art. Why can men not be at one with themselves and the world? The æsthetic sphere is not the deepest element in us. It does not satisfy our whole spiritual need, because it is not fundamental, it does not touch the roots of life and action. They are inwrought with our moral nature, in the sphere of the affections and the realm of the heart with its impulses to love and to trust, its craving for righteousness, its strong urgent sense of duty binding on the will, its feeling of sinfulness, its faith in God and our own immortality. Physical nature and her sensuous influences in themselves considered belong solely to the pre-moral stage, whereas the high and holy experiences of Christian faith move in the realm of spiritual being, and only the man who feels them in his heart will ever see them reflected

[18] Rom. 1:18–32.

in the face of Nature. Here Coleridge's words are true to the letter:

> " . . . we receive but what we give,
> And in our life alone does Nature live." [19]

She reflects faithfully our changing moods of joy and depression, she can uplift in hours of prayer and devotion, but she cannot comfort in hours of gloom and sorrow, or of self-reproach, if there be no prayer and faith.

Thus all attempts to make a religion out of nature are foredoomed to failure, for æsthetics covers only a small part of the varied experience of man. It does not touch the deeper ethical life of the spirit and the affections. Nature has no balm for broken hearts and wasted years, and no sedative for bitter shame or remorse for guilt. This is the secret of the bitter pessimism of many philosophic writers, such as Schopenhauer, von Hartmann, and even Goethe at times.

The clearest expression of the ultimate outcome of a life content to rest in nature, defiant of duty, careless of God, is found in the inner discord and the bitter dissatisfaction that mark the writings of Byron and Shelley. They separated (as Wordsworth never did) the spirit of nature from the spirit of God, and lived solely for the beauty without them, never looking on the moral beauty within the soul. They expected Nature, herself impersonal, to give them the blessing of peace, which only a Person can give to persons. After reckless lives they plunged, as it were, into the fountain of nature's beauty, hoping to come forth purified and forgiven with the inner monitor silenced. In the earlier days of life's freshness they were lifted out of themselves, but later the charm would not work. Byron and Shelley stand forth in their own persons as the very embodiment of bitter pessimism, reaping what they have sown. Thus Byron writes:

> " Our life is a false nature — 'tis not in
> The harmony of things, — this hard decree,
> This uneradicable taint of sin,

[19] *Ode to Dejection.*

. . . all the woes we see —
And worse, the woes we see not — which throb through
An immedicable soul, with heart-aches ever new." [20]

And:

"How beautiful is all this visible world!
How glorious in its action and itself!
But we, who name ourselves its sovereigns, we,
. . . with our mix'd essence, make
A conflict of its elements . . .
Till our mortality predominates,
And men are — what they name not to themselves,
And trust not to each other." [21]

Shelley early in life tells us that:

"The universe,
In Nature's silent eloquence, declares
That all fulfil the works of love and joy —
All but the outcast man." [22]

And later he asks in pain:

"And who made terror, madness, crime, remorse . . .
And self-contempt, bitterer to drink than blood?" [23]

(The use of the imagination is discussed in the Appendix, Note N.)

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[20] *Childe Harold's Pilgrimage,* Canto IV; 126.
[21] *Manfred,* Act I, Sc. 2.
[22] *Queen Mab,* III.
[23] *Prometheus Unbound,* Act II, Sc. 4.

CHAPTER IX

THE WITNESS OF THE HUMAN SPIRIT TO THE INFINITE AND PERFECT BEING

THE ONTOLOGICAL ARGUMENT

We began with the objective study of the universal faith of mankind in God, which is the expression of an intuition, vague but real, of the divine. This religious instinct, which anthropology considers a characteristic of man, demands, like all other instincts, a corresponding reality as its source and end, an environment of spirit. We confirmed this intuition and distinguished more clearly its contents by means of the witness of Nature to her Maker, and the testimony of man's threefold consciousness to similar attributes in God.

Now we proceed to the analysis of this intuition itself, the so-called Ontological Argument. This line of reasoning is not properly an argument, being mystical or intuitive rather than intellectual or logical; it is the reverent study of the witness of God to Himself, that τὸ γνωστὸν τοῦ θεοῦ which God has revealed in the heart of man. It is common to all devout minds, but seldom formulated. To the ideas of God, confirmed by preceding "proofs," it adds the conception of infinity and perfection. It is *a priori* in that the conception of the Infinite from which it starts is not the *a posteriori* result of experience, but is given in our spiritual nature itself. Many writers begin Apologetics with this argument, but this is not the logical order, for religion is clearer if we first study its own witness to itself in history, and then pass on to its evidences in nature and man.

This intuitive "feeling" of God results from our own spiritual being. Spirits cannot but be conscious of the Spirit in whom they have their being. That this vision is so dim and

wavering in most men is the consequence of sin, dulling the spiritual vision. Men are "alienated from the life of God," because the eye within is partially blinded or wilfully closed, "Ye do not will to come unto me that ye may have life," [1] said the loving Christ in sad reproach, and in sterner accents of warning, "If the light that is in thee be darkness, how great is the darkness!" [2] Still, however dim, the consciousness of the Divine remains, for man cannot lose the image of God. Man knows God best through self. The universal *sensus numinis,* the feeling of Infinity which God has set in the heart of man, is the basis of all faith; it is this which makes religion possible as devout feeling, not as philosophical speculation.

The world of experience cannot create the intuition, but it does awaken and develop it. The sight of things transitory and finite arouses immediately in the heart the feeling of the Infinite and Eternal, and our recognition of our own imperfection brings with it the certainty of a Perfect Being, the source and realization of all righteousness. In both cases, there is nothing in the finite experience itself to cause the faith in the Infinite; that is the act of the spirit alone.

No element in consciousness so clearly indicates and expresses the spirit in man as the "illogical" deductions of Infinity and Perfection from finite and imperfect phenomena or experiences. It is a quick movement of the heart to a certain and undoubted conviction, which can not be justified by the intellect, nor proven by any experiments on phenomena. It rather accompanies them, awakened, but not in any sense created, by the outer experience. In the presence of innumerable, intricate, complex phenomena, seemingly unrelated and antagonistic, the spirit rises at a bound to the thought that nevertheless all existing things do form a whole in a perfect unity. It discerns a divine unity in the multitudinous "many" of the world. The sight of things limited in number, fixed in quality, successive in time, ever changing in relations and appearances somehow arouses faith in a Being who is

[1] John 5:40.
[2] Matt. 6:23.

not limited by time or space, and not conditioned by this world which exists only through and by His will. Among things finite, He is infinite; amid things temporal, He is eternal; amid things changing, He changes not; yesterday, today, and forever the same.

"Only That which made us, meant us to be mightier by and by,
Set the sphere of all the boundless Heavens within the human eye,
Sent the shadow of Himself, the boundless, through the human soul;
Boundless inward, in the atom, boundless outward, in the Whole." [3]

Each of the three modes of human consciousness forms a starting point for a distinct line of theistic thought. The intelligence sees in nature the physico-teleological proof; the will and moral sense yield the argument from freedom and conscience; while spirit, the emotional nature on its highest side, gives the feeling of the Divine which underlies every form of the ontological argument. Recent philosophical thinkers have begun to recognize the vital import and worth of the spiritual nature of man, the inner world of social, ethical, and religious feelings, which alone creates the outer world of society and the sentiment of humanity, and finds expression in the world of literature and art. The purely logical thought, which Hegel makes the basis of being, has been superseded in recent philosophy by the will-to-be of Schopenhauer, and that has been completed by the conscious will-to-the-good of ethical theists. The mere intellect is no longer the sole arbiter of truth and reality.

The deep convictions of the heart and the higher needs and faiths of humanity, as such, are now recognized as valid witnesses to those aspects of the Infinite Reality which are not sensible and logical. Kant began this movement with much hesitation in the *Critiques of Judgment* and *of Practical Reason.* It has been further developed with firmer conviction by many more recent philosophic thinkers, *e.g.,* Lotze, Secretan, Kuno Fischer, James, Balfour, Seth, and Baldwin. Professor James through Pragmatism, brings out the emphasizing of

[3] Tennyson, *Locksley Hall Sixty Years After.*

will and act (pragma), as the leading principle, rather than perception and intellection. Differing in many points, these thinkers agree that the clue to the nature of Reality lies not through logical reasoning and experimentation on physical facts, though these have their place and use, but through practical activity with self-conscious purpose under ethical motives in the great world of human relations. The famous syllogism of Descartes, "I think, therefore I am," is giving place to the deeper thought, long ago expressed by Benjamin Whichcote, but then ignored, "*I act, therefore I am.*"

This quickening breath of a deeper and more human thought is blowing through the temple of Science itself, awakening its worshipers to a larger life. Karl Pearson tells us that there is a manifest restlessness and uncertainty in scientific circles as to the finality of the method of pure science. The mechanical theory is no longer counted the one and all-sufficient outlook on the universe and human life. Virchow and Du Bois-Reymond exposed its utter inability to explain the actual facts of nature and of man, and still more recently Professor Ostwald of Leipzig assured an association of scientists at Lubeck that, in his view, scientific materialism, the theory that matter and force are the sole and ultimate realities, is utterly untenable. "The mechanical conception of Nature is not scientific but metaphysical, and must give way to a wider view which takes in all the facts"; an opinion which Lord Kelvin shares.

Even Psychology has helped on the cause of spiritual faith, for its maxim of the equality of all "facts" in our complex consciousness has weakened the inveterate tendency to look on the understanding as the one truth-discovering faculty, and to regard man solely as "a reasoning, self-sufficing thing, an intellectual all in all." Many thinkers are returning to the long discredited view of Jacobi: A reality revealed by the senses requires no guarantee; so reality, revealed by the inner sense, the power of intuition, which distinguishes man from the brutes, is its own competent witness to its own veracity. Each sphere of consciousness has its own field and its own

kind of certainty.[4] Very similar is the position of many psychologists, such as Lotze, James Seth, William James, Ward, Marshall, and Mark Baldwin. The latter writes: "Truth is the sort of reality which we reach by an equally inexorable demand of our nature that we recognize what is logical. And our ethical and religious life in organizing its experience reaches the reality which we call God."[5] He holds that the principle on which we should work is that "the final needs of our nature" must have their justification in reality.

The intensely practical question of William James, If needs of ours outrun the visible universe, why may not that be a sign that an invisible universe is there?[6] receives unexpected support in the old stronghold of intellectualism through the recognition of the world of feeling by such masters of modern Logic as Sigwart, Brentano, and Erdmann. They hold that judgments ultimately depend on mental assent, assurance, and personal conviction of truth. Without such "belief" logic is a mere circle of tautologies, ending nowhere. No logic as such can prove reality, nor can it disprove any reality affirmed by the heart or our ethical or spiritual nature. Each sphere of consciousness, the convictions of conscience as well as the conclusions of the logical understanding, the inner certitude of personality no less than the sensational certitude of externality, bear their own convincing witness to the reality corresponding to their demand for satisfaction, each according to its kind. "It is impossible," says A. J. Balfour, "to refuse to ethical beliefs what we have conceded to scientific beliefs. . . . Both require us to seek behind these phenomenal sources for some ultimate ground with which they shall be congruous, and as we have been moved to postulate a rational God in the interests of science, so we can scarcely decline to postulate a moral God in the interests of morality."[7]

These convictions, underlying all forms of consciousness,

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[4] See Preface to 2nd Vol. of his works, forming the "Introduction to the author's collected philosophical writings."

[5] *Fragments in Philosophy and Science*, pp. 341, 2.

[6] *Is Life Worth Living?*

[7] *Foundations of Belief*, pp. 332, 3.

make men ontologists by nature. No man ever argued himself into religious faith. He reasons out his faith only under the compulsion of doubts in himself or others. The Bible takes God for granted. Prophets and apostles make their appeal directly to the spirit of man, commending themselves to every man's consciousness by the manifestation of the truth. "He that hath ears to hear, let him hear." The deep saying of the Preacher of old, God hath set Eternity (or Infinity) in the heart of man,[8] affirms the spiritual nature of man, and St. Paul laid the certain foundation of all spiritual philosophy in his clear statement, "That which may be known of God is manifest within men, for God Himself hath made it manifest to them." [9] The eye could not see the sun were it not sun-like, fitted to transform the throbbing pulsations of the ether into the mystery of vision. Or in Goethe's striking rendering of this thought expressed by Philo:

> "Were not a sun-like virtue in the eye,
> It would not seek the sun that rules the sky;
> And, were no God within to stir the brain,
> The God without would speak to us in vain." [10]

Christ never argued, He simply spoke the truth, and let those who willed to do so see and accept it. Arthur Hugh Clough at last came to feel:

> "Ah yet, when all is thought and said,
> The heart still overrules the head;
> Still what we hope we must believe,
> And what is given us receive." [11]

So, too, Browning cries:

> "I have one appeal —
> I feel, am what I feel, know what I feel;
> So much is truth to me." [12]

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[8] Ecc. 3:11.
[9] Rom. 1:19.
[10] *Zahme Xenien,* III, Blackie's translation.
[11] *Through a Glass Darkly.*
[12] *Sordello,* Bk. VI.

This instinctive faith in God has been recognized by all spiritual thinkers. Homer in the Odyssey uses ὑπόληψις τοῦ θεοῦ, the exact equivalent of the Latin *sensus numinis*. Plato and Aristotle both teach that there is a point in man, τὸ θεῖον, where he depends on, literally "hangs from," God. In the Book of Job we are told that "there is a spirit in man, and the breath of the Almighty giveth them understanding."[13] This is a thought which Philo seems to develop when he tells us that our knowledge of God is really God dwelling in us. He has breathed into us something of His own nature, and He is the Archetype of all that is in us. So, too, Irenæus taught that all men know that God exists, for the Word that dwells in the soul reveals Him. Origen writes clearly that Christians distinguish — and with them the distinction is not an idle one — between Reality (τὸ ὄν) that which abides, and phenomenon, that which is ever changing and becoming,— between things apprehended by the νοῦς, and things perceived by the senses, *i.e.,* between the spiritual and the material. He adds that the disciples of Jesus study phenomenal appearances to the senses only that they may use them as steps to ascend to the knowledge of the truths of the soul. For the invisible things of God, *i.e.,* the truths or intuitions of the soul, are clearly seen by the reason in the things that are made; and when they have attained to the knowledge of the things of God revealed in created things, they do not stop there but, having trained their spiritual faculties upon them, they ascend to the thought of God Himself.[14] Pascal seemed to hear God saying to him, "Thou wouldst not seek Me, if thou hadst not (already) found Me."[15] There are two lines of an old Latin writer, I do not know whom, which express the truth about personal inspiration:

> "Nulla fides si non primum Deus ipse loquitur,
> Nullaque verba Dei nisi quae in penetralibus audit
> Ipsa fides."

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[13] Job, 32:8.
[14] *Contra Celsus,* Bk. 7, Chap. 46.
[15] *Thoughts,* Chap. XXII.

Kant mistrusted the Ontological Argument as an argument *in se,* but yet he admits that the other arguments all derive their undoubted force from ontology, *i.e.,* from our strong convictions. Martineau in his *Study of Religion* ignored altogether the ontological "proof," and rested all on natural theology and conscience, yet he admitted later that there is all along a revelation in the mind before any argument is used; that there is an immediate, strictly personal knowledge, or faith, in God, born anew in every mind. The Cambridge Platonists, Benjamin Whichcote, John Smith, Ralph Cudworth, and Henry More were never tired of quoting the verse from Proverbs which says that "the spirit of man is the candle of the Lord,"[16] lighted from God, and lighting us to God. "There is," says Whichcote, "a natural and indelible sense of Deity in every rational soul; and this is fundamental to all religion." This conviction makes all men unconscious ontologists. They accept the thought while rejecting the term. The strength of this unconscious ontology appears in the fact that many "intellectualists" like Thomas Aquinas, who criticize "feeling" as unreliable, yet find they cannot depend on logical reasoning alone, and fall back on the postulate of their own being, that existence itself implies a Supreme Cause on which it is based.

The Ontological Argument may be stated under three aspects, according to the special class of convictions to which we appeal.

1. We are conscious of sense-impressions and their unity in the world. This consciousness is ever accompanied with an irresistible feeling that there is something external which causes these impressions, matter or substance, which resists our will and which, in turn, must have a ground for its existence. This experience, as we have seen, awakens the thought of the Infinite as the permanent ground and source of all transitory existences. This is the oldest and commonest form of Ontology — God as Real Being.

2. We are conscious of an inner world of thoughts and of

[16] Prov. 20:27.

definite logical relations between them, which we also find embodied in nature. With this experience, we have the feeling of the universality and certitude of logical and mathematical principles, and we think of God as Infinite Truth. This gives Rational Ontology, God as the ground and source of the Reason.

3. We are conscious of ethical relations, of distinctions between good and evil, right and wrong, and with this comes ever the profound sense of the duty to choose and love the former as obligatory on all persons or spirits in the universe. This gives rise immediately to the simplest and most intense form of Ontology, that which feels and demands God as moral Perfection, the source and realization of righteousness.

In a note in the Appendix we examine more closely into the Ontological Argument according to these lines of thought, showing these distinctions to be not abstract conceptions, but concrete, strong and clear convictions in the triple life of men.[17] Though this threefold division has not often been clearly made, it is not new. Aristotle and Augustine show these three elements in their thought of the nature of God. The former tells us that God is pure Being, Thought in itself, and Goodness in itself; while the latter writes that we are created in the image of God, Who is Eternal Being, Eternal Truth, and Eternal Love. Christ suggests the same threefold elements of the Divine Being, only with Him they are all personal, "I am the Life, the Truth, and the Way," *i.e.,* the revelation of love in action.[18]

The revelation of the life of God in the life of Jesus Christ has gathered up into brilliant focus (as the carbon points make visible the unseen electric current), the hopes and aspirations and faiths of humanity, confirming, intensifying, and consecrating them beyond the highest reaches of human thought. We are born into the full light of the Christian day, and not into the dim twilight of the pre-Christian dawn when the sun was below the horizon, though heralding its own rising.

[17] See Note O.
[18] John 14:6.

Even our sceptical literature and our science have a background of ethical feeling and of moral ideals, unknown to the pagan world. Yet Christianity only awakens and wonderfully extends the old witness of the heart at its best. It does not teach things new and novel, undreamt of before. It brings forth out of its divine treasure "things new and old," the new springing out of the old. This faith rests on no outer authority of Bible or of Church. It is the instant recognition of the truth which the Bible and the Church always teach. It is the response of the soul to the Gospel revelation. We do not believe that God is love because the Bible says so, we rather believe and reverence the Bible because its teaching corresponds to our highest faith.

A century ago ontologists were few and far between, voices crying aloud as in a lonely wilderness, and even these speakers hardly realized their far-reaching significance. Among them, however, Schleiermacher holds a place of unique distinction. It is the glory of our age and the assurance of our faith that their thoughts are now common thoughts and their words resound in living echoes on every side. A noble enthusiasm for the Right and the True inspires our best literature, and we have noted the evidence of the rise of a more human spirit in the specifically human sciences, Logic, Psychology and Sociology. The battle between faith and unfaith is not yet won, but we may confidently hope that this century will witness the reconciliation of the realms of Feeling and Will with that of Knowledge, through the inspiration of a science that is humanized and a Christianity that is spiritualized, both reverencing that inner world of nature and character, of deep convictions and noble affections, of faith and hope and love, to which the outer world of things is subordinate and wholly instrumental.

> "We babble much of proof; let us talk less!
> We can but prove the lesser, lower things,
> Things farther from us. When God's blessedness
> Dwells in us, as the light in dew, it brings
> An instant recognition. Does not our need

That clamors for the Unknown, Whom Paul
Declared at Athens, once for ever, plead
That by its strong demand, its tears and cries,
Too near ourselves for proof, God ever lives?"

CHAPTER X

THE DENIALS OF GOD

PHILOSOPHIC ANTI-THEISTIC THEORIES

Monism is a general name for the philosophic theories which deny any real distinction between God, the self and the world. The three, or the two, are held to form a unity, the thinking subject and the object thought being one in the Absolute.

The ground of this unity may be conceived in two ways, according to whether consciousness or nature is taken as the basis:

1. Philosophically, in terms of consciousness, which gives pantheistic Idealism in philosophy and Pantheism in religion, and

2. Scientifically, in terms of sensation, which gives Naturalism in philosophy and Atheism in religion.

This distinction of the theories which deny the personality of God will form a natural line of division between chapters. The theories cross the line, however, for there is a form of Pantheism which is naturalistic and, what amounts almost to the same thing, a form of Naturalism which is pantheistic. These hybrid forms will be mentioned in the proper places. In the present chapter we will concern ourselves with the philosophic antitheistic theories, taking up the leading forms of Pantheism. We will then be in a position to comprehend clearly by way of contrast the Christian doctrine of Divine Immanence.

I PANTHEISM

According to Pantheism, God, mind, and the world are in some sense identical. Our being is part of the universal Being of God, which is the cause and ground of all phenomena,

and becomes conscious of itself only in man. This is a most ancient philosophy, and was fully developed in India, where it holds sway today. But our concern with it lies in its restatement in modern times by Spinoza and Hegel, the former giving us a materialistic and the latter an idealistic pantheism.

Spinozism

Baruch Spinoza was born of Portuguese-Jewish parents at Amsterdam in 1632. His free philosophical speculations led to his being excommunicated by the synagogue, and he finally settled at The Hague, where he lived quietly and obscurely, much respected by his neighbors for the beauty of his character. His opinions were hardly more pleasing to the Christians than to the Jews, though he was offered the chair of Philosophy at Heidelberg. His love of intellectual independence led him to decline this high honor. His death occurred in 1677. His two chief works are *A Theologico-Political Treatise,* published anonymously in 1670, and *Ethics Demonstrated Geometrically,* issued with several other treatises after his death.

Only certain phases of his system can be treated here. His abstract and scholastic terms, his form of rigid mathematical demonstration, and his acknowledged inconsistencies would make even a long treatment difficult. Spinozism is the logical development of Descartes' philosophy with its postulate of the absolute distinction between body and soul, which yet form an inseparable unity, and is the consistent application of the method of the French philosopher. This form of pantheism is called materialistic because it regards matter as different, though inseparable, from mind.

Spinoza holds that the one eternal, self-existing, *sui-causa* reality is " substance," with an infinite number of attributes, of which we, by analogy with our own being, know only two — thought (mind) and extension (matter). These are absolutely inseparable. As the two streams of experiences, physical and mental, do not affect each other, God is in no sense the creator of the world by his will. Matter is as essential to

his being as mind, and the universe is the necessary expression of his nature.

Men are only transitory modes of substance, *necessary* expressions of divine Being. They, too, are composed of body and mind, two parallel series of modifications eternally answering to each other. Although body does not cause or affect the mind's thought, and mind does not control the body, nor cause its motions, yet the body with all its properties and acts is the object of the mind's thought; whatever body does, mind perceives, and the greater the energizing power of the body, the greater the perceiving power of the mind. This takes place, not because they are adapted to each other by some predetermining power, God, as Leibnitz held, but because mind and body are *una atque eadem res,* one absolute being affected in the same manner, but expressed under two different attributes, as if the same thing were said in two languages.

The importance of this theory lies in its reappearance in scientific circles today in the widely accepted theory of Psychological Parallelism. "That which we call soul," says one, "is the *inner* being of the same unity which we *outwardly* perceive as the *body* belonging to it," or in the words of another, "Perception, memory, reasoning, are the subjective side, whose objective side is a nerve vibration or a discharge of physical force. We can state the equation in terms of either." The entire independence of each series is asserted. Ideas and volitions do not follow each other causally, but simply attend the brain processes as shadows attend substance. They come and go and combine as the nervous motions determine, and this physical order works along its own lines mechanically without any choice, being the product of its own material antecedents. Because the modern parallelists thus throw their emphasis on the material side of the double series, it is best to reserve full discussion of their theory for the chapter on scientific monism or naturalism. The ethical theories of Pantheism are treated in a note.[1]

[1] See Note P.

Hegelianism

Hegel, the great representative of idealistic pantheism, was born at Stuttgart, 1770, and died as a professor in the University of Berlin, 1831. As in the case of Spinoza, some of his chief books were not published until after his death, among them his well-known and comprehensive work, *The Philosophy of History.*

In his mind the Absolute is the Idea or "Spirit" which objectifies or manifests itself in the world, in which it loses itself, becoming the unconscious, organizing principle of its own development according to the logic of pure thought. In man it emerges into self-consciousness, and knows itself as spirit. This divine thought, as consciousness, is found in humanity as a whole, individual men being only transitory foci of its manifestation. This is practically Spinoza's "necessity of being," only the emphasis is thrown on thought. It includes also Leibnitz' theory that all possible thoughts and ideas must find expression, and through conflict gradually realize themselves. It cannot be said that God is responsible for or caused the world process, for the Absolute *is* the world process. It *is* movement, it does not produce movement. It does not exceed the world, it is wholly in the world, and is fully manifested in phenomena and history. The logos of the world process is one with the logos of our own minds, it does not surpass it.

The ancient pantheism of India and that of the Eleatic school in Greece, which held true being to be changeless, and all phenomena and movement to be unreal appearances, was profoundly modified by Hegel's conception (unthinkable to non-Hegelians) of an evolution of the Absolute itself, correlative with the evolution of the cosmos, and his identification of the principle of this development with the logic of human thought, and of its order with the actual process of human history. The world spirit had the patience to traverse all time and to take on itself the tremendous labor of the world history, in the course of which it infused into each form all it was capable of holding. This theory of history, as an evolution of the Zeit-

geist, involved the view that each historic movement was good. Each stage was fully suited to its own period, for each particular change and movement is divine. He had the courage of his convictions and declared the Prussian constitution of his day the best possible, which did not enhance his popularity. But though Hegel claims to deal with a historic process, he denies that the separations of time have any reality at all. They have no existence for God. The "good" is eternally accomplished in the world. The consummation and the process of history that produces it are envisaged together by God as one great logical drama. His great principle was that development is through conflict, the reconciliation of opposites. Progress has to pass through three stages; first, thesis or equilibrium, then antithesis, as the result of men questioning the thesis, and finally, synthesis, which comes from the reconciling of the old and the new. This handy theory was applied by Strauss and Baur to New Testament history with interesting results.

Hegelianism, by its ruling idea of development through inner growth, acted as a ferment in the European mind, and exercised a most stimulating influence on every side of contemporary thought — critical, historical, and theological. In a modified form it has many followers. The obscurity of Hegel's thought and expression has given rise to a right and a left wing among his disciples, who have divided on the vital question as to whether the Absolute, the starting point or subject of the whole world development, was at first conscious spirit or not. The right wing is conservative and constructive, theistic and often orthodox in intention, while the left is radical and destructive, atheistic and often materialistic. There are two alternatives with regard to the subject of this cosmic evolution. Either God is conscious spirit (but, then, how could he "lose" himself, there being nothing in the universe but himself?) or the Absolute is at first pure Being having no attributes such as consciousness, then, becoming energy or force, it evolved upward to man, in whom the Idea becomes conscious (but, if so, is God not just as much a product as

man?). The left wing chose the latter alternative, and led by Feuerbach, Strauss, and others insisted that the Absolute existed first in a preconscious state. Thus as unconscious, impersonal spirit, it is practically identical with potential energy; thought is, therefore, only a modification or allotropic form of physical force. In other words it is merely the cosmic force working in matter and in due time bringing forth man, the only being who can think, and in whom alone the Idea attains to consciousness, though even his thought is the product of his body and its environment alone. This is thinly disguised materialism.

The right wing on the other hand finds many principles which support or illustrate Christian doctrine. Hegel counted himself a Christian believer, and many of his spiritual followers have been helpful theologians, though his system as a whole is not consistent with historic Christianity.

Difficulties of Idealistic Pantheism

1. *Denial of the "substantial" reality of matter*

The world is held to exist only in consciousness. This difficulty besets almost every form of idealism. It is summed up in Berkeley's phrase, *esse est percipi.*

This philosophy holds that reality is to be sought in the contents of consciousness alone, yet begins by denying a primary and intense affirmation of consciousness, the certainty of an external non-ego, whose distinctness from the self is the very condition of that self-consciousness which idealism makes fundamental.

The firmest conviction which we have is that of the external world and its contents. The distinction between thoughts and things is radical and universal. The peculiar certainty that things exist outside the mind attaches to no other conscious experience. It begins with the first act of a child's mind, which sharply though unconsciously discriminates between its ideas and outer real things. All idealism tends to confuse or weaken personality, and as Reid said "breeds scepticism in

every aspect of life." To doubt the truth of the mind's fundamental beliefs and laws would be to doubt reason itself — "which, unless itself reliable, turns all reason to a lie."

2. *Denial of the Divine Personality*

This brings us to the main argument relied on to prove that the Infinite One cannot possibly be a person. It is very simple. Personality plainly implies limitations, for we could not know ourselves were there not other things by contrast with which we distinguish ourselves as separate beings. But the Absolute — its very name proves this — embraces all things and excludes nothing. Having naught wherewith to contrast Itself, how can it ever know Itself? There is a childlike simplicity about this oft-used argument which is refreshing amid the arid plain of philosophic speculation. Only the glamour of grave and revered names hides its fallacy from the common mind, for it obviously confounds the discovery of the self with the actuality, or even the potentiality, of the self. Finite spirits do come to self-consciousness only through contrast with the non-self. But the self is not created, it is only revealed by this process. To make this condition of our finite consciousness the *differentia* of all personality in the universe is wholly unwarranted. To say that the Eternal Spirit cannot be a person unless He comes to self-consciousness in the same way the baby does, what is this but anthropomorphism run mad, such as no theologian ever dreamed of? When Aristotle theologized he felt that before creation the eternal Energy was eternal Thought. Christian thinkers as early as Tertullian, taught clearly that in the eternities God would not be alone but would know Himself through communion with the eternal Logos, the divine Thought. Is it not in this way that all men realize their separate being when babyhood is past, distinguishing the self from the thoughts and memories which possess the mind?

3. *Denial of personality and hope of personal immortality*

Men are only transitory "vehicles of the one eternal consciousness."

This identification of God and man is fatal to any individuality in man. Most Hegelians deny free-will and give up ethical duty. The test of the meaning and value of such theories is the ethical question whether deliberate wickedness is God's act or man's? Thus Royce declares Job to be wrong in his solution of the problem of evil by the presupposition that God is a being other than the world and himself. He tells the victim of sorrow or physical pain or moral evil: "God is not in ultimate essence another being than yourself. He is the Absolute Being. You truly are one with God, part of his life. He is the very soul of your soul. When you suffer, *your sufferings are God's sufferings,* not his external work, not his external penalty, not the fruit of his neglect, but identically his own personal woe. In you God himself suffers, precisely as you do, and has all your concern in overcoming this grief." The true question, then, is not why *we* suffer, but why *God* suffers, and the unsatisfactory answer is, "Because without suffering, without ill, without woe, evil, tragedy, God's life could not be perfected. . . . It is a logically necessary and eternal constituent of the divine life. . . . No outer nature compels him. He chooses this because he chooses his own perfect selfhood. He is perfect. His world is the best possible world." [2] He passes almost directly from physical evil to moral evil, but speaks no clear word. If moral evil is a "reality," yet something in its very nature "to be eschewed, expelled, assailed, resisted," how can it be a "self-chosen" product of the Absolute Self? If it is willed to arise in the "fragments" as a means to the perfect self-hood of the Whole; it outrages the moral consciousness that the "fragments" should be condemned for the doing of it.

The denial of personality carries with it the denial of immortality. Hegel does not write clearly on immortality; but Spinoza with noble inconsistency asserts it in a timeless and curiously abstract form. The goal of all life, according to Pantheism, is to return to and disappear in God, the world-all.

[2] *Studies of Good and Evil,* p. 14.

This is most logically worked out in India, where according to the Sufi mystic the soul is absorbed into the ocean of divinity, according to Hindu philosophy it reenters into the eternal Brahm and, according to the teaching of Gautama, the Buddha, it obtains Nirvana.[3]

4. *Necessity is an essential characteristic of all consistent Pantheism*

The simple test of Pantheism, however disguised in a maze of words, as by Hegel, is whether or not God acts freely by will. True pantheism denies this, and hence still more emphatically it denies man's freedom. Thus we find Seneca writing that God is nature, is fate, is fortune, is the universe, the all pervading mind; he cannot change the substance of the universe for he is himself under the power of destiny, which is immutable. Heine seized on necessity as a mark of pantheism: "On my way," in his search for a God in philosophy, "I came across the God of the pantheists, but I could make nothing of him; the poor visionary creature was so interwoven and ingrown into the world as to be imprisoned in it. He yawned at me with imbecile smile without voice or power. To have will, to have personality, one must have elbow room to act."

5. *Denial of ethical distinctions*

The existing order within and without our consciousness is either the necessary expression of the divine nature (Spinoza), or else the logical form of the self-evolving Idea (Hegel). Freedom is as impossible to the Creator as to the creature. Time, the condition and ground of history, is itself an illusion. Hence, all moral distinctions disappear; good and evil are indifferent. Logically this ends in the phrase of Pope, "Whatever is, is right," which Huxley declared was "a motto fit for a pig-stye." Hegel denies the distinction between what ought to be and what is. "The insight to which philosophy is to lead us is that the real world is as it ought to

[3] Interesting illustrations of the pantheistic denial of personal immortality are given in Note Q.

be." In another place he declares that philosophy has nothing to do with the question of what ought to be, but simply of what is. All acts are equally divine and necessary, the basest as well as the noblest, the worst as well as the best. Spinoza's ethics were deprived of all real value through his fatalism, though he tried hard to reconcile the two. To maintain their fundamental principle of the absolute unity of the divine and the human, and yet find room for ethical life with its profound sense of moral freedom and responsibility, is the vital problem which the Neo-Hegelians are ever striving anew to solve.

Pantheism starts from and aims at the idea of philosophic unity, either the unity of being (Spinoza) or unity of thought (Hegel), and sacrifices everything to that. Theism starts from the ethical consciousness, our feeling of personality. It sacrifices the idea of unity whenever it comes into conflict with moral distinctions, confusing right and wrong. The idea of unity was fully worked out in India, in one school in China, and to some extent in Greece and Rome. The ethical idea, as followed by Jewish prophets and Christian apostles and thinkers, makes the world of thought and matter secondary and concentrates attention on moral and spiritual ideas, on the relation of God to men as the Father, of man to God as child, and of men to each other as brothers. Theism must be ethical, if it is to be religion and not pure metaphysics. Therefore it depends on the conception of personality in God, and of real but finite personality of man. Philosophy aims at absolute unity, but Theism admits the idea of plurality of spirits or wills.[4]

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[4] *Idealistic philosophy,* as distinct from avowed pantheism, divides today on two lines, according as it follows Hegel's conception of the Absolute as pure thought, or Kant's later affirmation of ethical reality and teleology, moral character alone having worth and forming the only intelligible reason and purpose for the world's existence. The Neo-Hegelians form a brilliant group, but the ethical idealists or realists are increasing in number and influence, owing to the tendency in recent philosophic thought to look on will activity, rather than logical thought, as central, the basis of being. This is more fully discussed in Chapter XV.

II THE CHRISTIAN DOCTRINE OF THE DIVINE IMMANENCE

This is a reaction from the deistic, mechanical idea of God of the eighteenth century and a return to the older, scriptural conception of Him as immanent in the world, the immediate, ever present source and ground of all existence. It differs radically from pantheism, in that it affirms the divine transcendence as well as immanence. God is a self-conscious and self-determined Person; before and above nature; Creator and Providence. Man also is a person, a spirit born of Spirit, distinct from God, yet in Whom he lives; morally free and surviving death in his personal being.

God's immanent presence in the world is a Bible truth. It is frequent in Amos, Micah, Isaiah, and Jeremiah. It is expressed by Job and the writer of the Book of Wisdom. The 8th Chapter of Proverbs, and the 8th, 104th and 119th Psalms show the same idea. Although later Judaism, the creation of the period between the Exile and the Advent, was deistic, conceiving God as far off and acting only through angels, Christ returns to the older view of God's action in nature, especially in the familiar passages in the Sermon on the Mount where He speaks of God as feeding the sparrows, arraying the lilies and clothing the grass. St. Paul tells the Athenians that in God "we live, and move, and have our being," [5] and writes to the Ephesians that there is "one God and Father of all, who is over all, and through all, and in all." [6]

Passages showing a view of the divine immanence in nature are frequent in the early Fathers. Some of these have been quoted in the discussion of Ontology,[7] but we might add here two strikingly similar passages from the Greek Gregory of Nyssa and the Roman Minucius Felix. The former writes: "When one takes a survey of the heavens, how can he help

[5] Acts 17:28.
[6] Eph. 4:6.
[7] See Note O.

believing that there is a Deity in everything, penetrating, embracing, and abiding in it. For all things depend on Him, who alone truly exists, nor can there be anything which has not its being in Him, who is the ground of all things." Minucius Felix asks, "For what can possibly be so manifest, so confessed, and so evident, when you lift your eyes up to heaven, and look into the things which are below and around, than that there is some Deity of most excellent intelligence, by Whom all nature is inspired, is moved, is nourished, is governed?"[8] Tertullian, also a Westerner, held that all things in nature are prophetic outlines of divine operations; God not only speaks parables but acts them.

This feeling of the divine indwelling in nature is not absent from the pages of the Schoolmen, and became very prominent when men returned to the study of nature in the Renaissance and Reformation. Luther's love of nature is one of his best known traits. Calvinism also teaches divine immanence. Zwingle can be made to speak for the rest of the reformers. "From God," he says, "as from a fountain, and if I may use the expression, a first material, all things arise into being. By God's power all things exist, live, and operate; even in Him who is everywhere present; and after His pattern who is the essence, the existence, the life of the universe. Nor is man alone of divine origin, but all creatures, though some are nobler and more august than others. Yet all alike are from God and in God, and in proportion to their nobility they express more of the divine power and glory. . . . We recognize in things inanimate, not less than in man, the presence of the divine power by which they exist, and live, and move. God is in the stars; and inasmuch as the stars are from Him and in Him, they have no essence or power or movement of their own; it is all God's, and they are merely the instruments through which the present power of God acts. For this cause He called creatures into being, that man from the contemplation of their

[8] *Octavius, XVII.*

mutual uses, might learn to recognize God's active presence everywhere, and especially in himself, when he saw it in all things else around." [9]

The doctrine of the divine immanence was first clearly stated in the spirit of faith by Herder; though Cowper, his contemporary, summed up the thought in these pregnant words:

> "One spirit — His
> Who wore the plaited thorns with bleeding brows,
> Rules universal Nature. Not a flower
> But shows some touch in freckle, streak, or stain,
> Of His unrival'd pencil. He inspires
> Their balmy odors, and imparts their hues,
> And bathes their eyes with nectar, and includes
> In grains as countless as the seaside sands
> The forms with which He sprinkles all the earth." [10]

How else, he asks, could matter seem as if it were alive

> "unless impelled
> To ceaseless service by a ceaseless force,
> And under pressure of some conscious cause?
> The Lord of all, Himself through all diffused,
> Sustains and is the life of all that lives.
> Nature is but the name of an effect
> Whose cause is God." [11]

It was the characteristic mark of the nineteenth century on its highest side, and received literary as well as theological expression. It runs through the writings of Wordsworth, Coleridge, Tennyson, and the Brownings. Thus Wordsworth writes of his communings with nature:

> "And I have felt
> A presence that disturbs me with the joy
> Of elevated thoughts; a sense sublime
> Of something far more deeply interfused,
> Whose dwelling is the light of setting suns,
> And the round ocean and the living air,

[9] *De Providentia.*
[10] *The Task,* VI: lines 228–246.
[11] *Ibid.,* VI: lines 218–224.

> And the blue sky, and in the mind of man;
> A motion and a spirit, that impels
> All thinking things, all objects of all thought,
> And rolls through all things." [12]

Divine immanence is a common element in the thought of today. God is no longer conceived as the first cause prefixed to the scheme of things, but as the indwelling cause pervading the world, not excluded by second causes, but working through them while transcending them, the one ever-living, objective Agent, the mode of whose omnipresent working must be discovered and interpreted through science in the outer field, and through conscience in the inner world.

This doctrine affirms both God's presence in nature and his transcendence above nature. Deism conceived the world as a system made, indeed, by God Himself, but so made that it might go on working indefinitely apart from His care, as a watch does apart from its maker's hand. Thus His transcendence must not be conceived in terms of space, as though it were outside the world, but in terms of quality. He works within the Universe, at the heart of things, but He transcends it in will, mind, and being, and its laws are only the expression of His will. The world is not His "clothing," in the sense in which our bodies clothe our spirits apart from our will or knowledge. Nor is it, as Hegel taught, the product of a logical evolution of divine Spirit objectifying itself, as necessary to God as God is to it. The world is simply His creation, existing by and through His will, the expression of His wisdom, a world of material things designed to be the habitation and training school of created spirits, who are to rule and use it as they will. There is a partial truth in both Deism and Pantheism. With Deism we say that God transcends the world, otherwise He is not God but only the world-spirit. With Pantheism we say God is within nature, otherwise nature would have no life, and God would not be omnipresent. We grant what each affirms, but not what each denies. The transcendent

[12] *Tintern Abbey.*

God is Creator and Lord, the immanent God is Providence and Sustainer. But the expression "divine immanence," though it cannot be well changed, is misleading. It suggests at first thought that the world exists, and then that God is immanent in it. The order should be inverted, first God is, and then the world exists as called into being by His power and by the continuous indwelling of His Spirit.

Berkeley was right in denying that matter existed in and for itself, it exists under divine guidance for man's use and work. The world was made to be inhabited, and all things were put under man to be ruled and used. But Berkeley's philosophical hobby made him guilty of the absurd idea that God Himself could not make anything objective. The world came into existence and continues to be not by any necessity of God's nature, but by the free action of His own will embodying His thoughts in concrete form, and His divine presence and action are continuous. This does not mean that things are "in God" in a spatial sense, but that they express His thoughts objectively. The divine immanence does deny the scientific concept of Nature as an independent, self-acting, self-made machine, but it does not deny the real existence of the objective universe, as a divinely ordered system of things, to whose laws our bodies are subject, and which does actively impress itself on our minds in experiences which we cannot evade. Nor does this view affect in the least the actual order and the phenomena of nature, which we learn through science, and which are the same for all observers, whatever their theory of the world's existence and action. Our knowledge of the world as it is is not weakened but deepened by our faith that it exists in and through God's will at every moment.

The mode of the working of the immanent divine Will defies analysis, just as does the working of the human will. We can only affirm that it acts ever from within outward, from the center to the circumference, but "God's center is everywhere and His circumference nowhere." We need not suppose that every phenomenon has back of it a separate and conscious act of will on the part of God. Our own experience

should teach us better. We do not will each separate step while walking. Having once begun walking we leave its continuance to the automatic action of the lower nerve centers, which the will sets to work and keeps at their work without further attention. So the world without ceasing to be dependent on God may have a relative independence, the divine power working within through ordained laws or orderly ways of acting.

Again this faith in the underlying action of God in no way alters the accepted scale of the value of things. It simply affirms that all finite things have no self-existence, but depend for their whole being on God's will, which does not put them all on a level in the scale of ethical worth. It leaves our judgments of value untouched. Worms and men alike have their being in God, but that does not make them of equal worth in God's sight. A worm is a creature of low degree, man is the highest of all created beings, even "a child of God." Christ Himself emphasizes this difference, "Ye are of more value than many sparrows." [13] Unless we bear in mind the vital truth that ethical value belongs solely to the world of personalities, and that all things, including animals, are only instruments, we shall attach a value which Christ repudiates to the lower forms of life.

These distinctions save us from falling into the dangers which beset the careless thinker on divine immanence. One of these is that we may lapse into the denial of personality in man, for we may exaggerate his dependence on God to the denial of moral freedom. Another danger is the obscuring of the personality and freedom of God, and such pantheistic confounding of good and evil as are found in "Christian Science," [14] and more recently in R. J. Campbell's *The New Theology,* which is little more than a half-Christianized stoicism.[15] A third danger is that personal immortality may be

[13] Matt. 10:31.
[14] See Note R, for discussion of Christian Science.
[15] Of late he has given a larger place to the truth of the Divine Transcendence, and should not be judged by this book.

denied, as is done in pantheism. Our sense of personality and especially the consciousness of duty and freedom make us refuse to permit monism to force on us the alternative that we are either nothing, or else parts of God Himself. We do not grant that the Divine in man means God in man as man. We simply fall back on our own consciousness of self-identity, which forbids our being a helpless part of God. On the contrary God's own voice in our hearts treats us as persons. The statement that there is no will that is not God's will seems blasphemous, for it implies that the Divine will is also back of all evil. We must think of God as the environment of spirit in Whom we live and move and have our being. But we also believe that God Himself did limit His own freedom of action, when He created beings or personalities whose very essence as spirits implies power to resist, if they will. He desires the service of free beings, not puppets. If we can get rid of the night-mare fancy of God as the Absolute, the one as including the all, we can accept the conception of Browning, who with all the great poets, affirms personality and will.

"In youth I looked to these very skies
And probing their immensities,
I found God there, his visible power;
Yet felt in my heart, amid all its sense
Of the power, an equal evidence
That his love, there too, was the nobler dower.
For the loving worm within its clod
Were diviner than a loveless god
Amid his worlds, I will dare to say.
You know what I mean: God's all, man's naught:
But also, God, whose pleasure brought
Man into being, stands away,
As it were a handbreadth off, to give
Room for the newly-made to live,
And look at him from a place apart,
And use his gifts of brain and heart,
Given, indeed, but to keep forever.
Who speaks of man, then, must not sever
Man's very elements from man,
Saying, 'But all is God's'— whose plan
Was to create man and then leave him

Able, his own word saith, to grieve him,
But able to glorify him, too,
As mere machine could never do." [16]

(See Note S for the *a priori* argument for miracles.)

[16] *Christmas Eve,* V.

CHAPTER XI

THE SCIENTIFIC SPIRIT AND METHOD

Before taking up the other great denial of God, Naturalism, it is well to consider the spirit of science and its method of procedure, in order that we may estimate aright the fundamental assumptions of all materialistic philosophies, and the validity of their conclusions. Science properly speaking is simply systematized and verified facts, knowledge seen in due perspective. Its method is purely that of inductive logic. When by the study of facts, the framing of an hypothesis to include them, and experimental verification, we have brought phenomena under some familiar law, we rest. Throughout we depend wholly on the principle of analogy, and the result is a description, but not an explanation of facts. What they are in themselves science cannot tell us. Most people have the idea that science makes everything "plain" and speaks the last word on any subject. But science without mystery is impossible. It can take no step without assumptions, and its conclusions leave one face to face with the mysteries of the Universe.

The vast majority of men treat the inner realm of spirit, of thought and motive, of desire and affection, of hope and faith, as unreal in comparison with the "realities" of the outer sphere of sense impressions. Consequently the idea has arisen that matter, which is so tangible, is the only real "substance." This practical, common-sense philosophy has been enormously strengthened within the last century by the wonderful triumphs of physical science, and by the advance of scientific theory and method from the outer field of things into the interior world of personality, till man in the *arcana* of his being is interpreted in the same mechanical terms as a crystal or a plant.

The feelings of the heart and the volitions of the will are accounted as inevitable as a chemical reaction or the growth of a plant.

This spirit has infected our whole system of education, and our colleges and universities tend steadily to the technical training of the powers of observation through practised eye and hand to the neglect of the older culture of heart and mind, in scorn of the old-fashioned idea that the proper study of mankind is man on the side of his thought and character and history. But the nemesis, which follows surely on every departure from the normal laws of life, takes vengeance in kind on the contemners of the higher interests of humanity. Science advances steadily, but at what a cost! Like Cronos, she devours her own children, demanding that her devotees literally *lose themselves* in their narrow fields of special study. The self-conscious thinker disappears in the mere observer and classifier of phenomena, who uses his mind simply as a tool, as an automatic register of facts, even as the eye receives impressions of the world but never sees itself. Charles Darwin's pathetic confession of the dehumanizing effect of over-specialization holds true of multitudes who do not feel, as he did, the greatness of their loss. "My mind, in fact, seems to have become a kind of machine for grinding general laws out of a large collection of facts, but why this should have caused the atrophy of that part of the brain alone on which the higher tastes depend, I can not conceive. The loss of these tastes is a loss of happiness, and may possibly be injurious to the intellect, and more probably to the moral character, by enfeebling the emotional part of our nature."[1] Many great thinkers and leaders in the field of molecular physics, such as Faraday, Clerk Maxwell, Helmholtz, and Lord Kelvin, have escaped injury because they kept their souls open to the winds that blow from God, but the rank and file lack the power or the will to do so. Accustomed from the nature of their daily work to subject everything to outward and palpable tests, they

[1] *Life and Letters,* Vol. I, p. 281.

are liable to fall under the blight of practical materialism.

Even with regard to mathematics, the "purest" of the sciences, Goethe warns us: "Mathematics can remove no prejudices and soften no obduracy . . . in the moral world generally its action is perfectly null." [2] Mathematics in its abstract form bears its own witness to the infinite and eternal. It is the most potent instrument of research in the world of matter. But in itself it is the most abstract of sciences, the least related to our highest interests, personal, ethical, and religious, which move in a sphere higher than the physical life, and the modes of work by which we sustain that life. Mathematics is a noble servant, but an ignoble master; it has its being solely in the world of quantities, while the heart of man lives in the conscious realm of qualities, in the world of "meanings." The historian Gibbon tells us in his memoirs, "As soon as I understood the principles, I relinquished forever the pursuit of the mathematics; nor can I lament that I desisted before my mind was hardened by the habit of rigid demonstration, so destructive of the finer feelings of moral evidence, which must, however, determine the actions and opinions of our lives." [3]

Tyndall makes a candid avowal of the limitations of science when he says: "Theologians have found comfort in the thought that Newton dealt with the question of revelation, forgetful of the fact that the very devotion of his powers, through all the best years of his life, to a totally different class of ideas . . . tended rather to render him less instead of more competent to deal with theological and historical questions."

The evil results of narrow specialization are easily discovered in the rank and file of scientific investigators. A speaker before the American Association of Science once complained, "While we are seeking to add to the number of workers, something should also be said about their quality. There is too much narrowness and too little culture." President David Starr Jordan avers that much investigation is useless or beside the point. The primary fault he thinks, is in our conception

[2] *Natur-Aphorismen*, IV.
[3] *Autobiographic Memoirs*, p. 34.

of research, which tends to point in the direction of pedantry rather than scholarship. Instead of a closer contact with nature and her problems, the student is side-tracked into some corner in which numerical exactness is possible, even though no possible truth can be drawn from the multiplicity of facts which may be gathered. Such work is in itself absolutely elementary. It teaches patience and perhaps exactness, although where the student finds that error is just as good as truth in the final round-up, he is likely to lose some of "the fanaticism for veracity" which is the central element in the zealous comradery of the extension of human knowledge. Some one has well indicated the three chief dangers the scientific worker faces: (1) The tendency to despise practical utility and to praise "pure science" at the expense of applied science; (2) over specialization, which makes vision narrow, and (3) positivism, which is the danger of confining all possible knowledge of reality to sense perception.

We should recognize the authority of science in its own sphere, and accept without question its ascertained facts and laws as distinct from its hypotheses — for real science is the revelation of the method of God's action in the world of matter. However, in reply to the often supercilious attitude of the pure scientist we should emphasize the narrow and inevitable limitations of all physical investigation. It can only classify and register empirical facts in their mutual relations; it is powerless to explain them, and it is silent and even indifferent to the often profound meaning of the facts to human hearts and souls. We are told that the scientific method is "disinterested," that it works for truth's sake alone, and seeks only the truth, but can it ever arrive by its method at more than broken fragments of the truth, or reach more than the lower aspects of infinite reality? The trouble is, Le Bon tells us, that there are no "simple facts," because no phenomenon is entirely isolable. All nature hangs together, and we can completely answer no question about it without at the same time being able to solve all its problems at once. This is why our modern science, while a great doer, is a bad explainer.

And Mach states that "assuming that a complete and simple description — admitting of calculation — is the aim of exact science, it is evident how much and how little we may expect from science. We shall not expect to find the ultimate and final causes, and science will not teach us to understand nature and life. The search after ultimate causes may perhaps be given up as hopeless; that after the meaning and significance of the things of life will never be abandoned; it is the philosophical or religious problem." [4]

The simple yet wonderful expression of all phenomena in terms of matter in motion has strengthened the inveterate tendency of pure science to apply mathematical methods to the interpretation of the thought world as well as the material world. The physicists today hold that our inner experiences, thoughts, feelings, faiths, and volitions are simply the inner sides of certain nerve motions in the gray matter of the brain, which themselves are the product of the multitudinous undulations in the ocean of ether which play upon us unceasingly. This is the accepted principle in most laboratory investigations, for their delicate apparatus can only register the nerve motions; it can tell us nothing of the psychical facts or thoughts, which they arouse in consciousness.

Not only is this human element ignored, but other physical aspects and relations must also be left on one side, while each particular series of phenomena is being isolated and studied on one line only, electrical, chemical, or biological. This abstraction is indispensable with our limited faculties and it yields true results on the line chosen, but all the other relations remain in nature and in fact despite our ignoring them. The physical student limits his whole investigation to mathematical relations, abstracting quality after quality till only quantitative relations remain, which mechanical science can handle. As a result of this one-sidedness the purely physical observers frequently fall into fallacies due to the misapplication of mathematical axioms. One such fallacy is to think that the axiom

[4] Merz, *European Thought in the XIXth Century*, Vol. I, p. 383.

"the whole is equal to the sum of the parts" is true of every sphere of experience. A watch ceases to be a watch when you have all its pieces spread out before you. Unless you are a watchmaker, you cannot put the pieces together and remake it. No chance arrangement can produce a mechanism. It is not the sum total of the parts, but the definite ordering of the varied pieces which makes the machine. Still less a thousandfold does the axiom apply to an organism, whose parts are held together and coordinated by the mysterious bond of life.

The wise student will work along a single line in scientific research, for there is no other way, but he will at times break through the narrow limits of such specialization and turn from the mechanical point of view to the study of the world as a whole with man as its head. To keep one eye glued to a microscope, or the attention fixed on a crucible is to view things in a wrong perspective. Famous as Dr. S. Weir Mitchell was as a nerve specialist, if we measure him merely as a doctor of medicine, we will have to leave out the scientist, the novelist, the poet, the lecturer, the historian, the critic, the connoisseur, the man of affairs, and the man of the world. Equally foolish is it to study one part of reality as unrelated to all the rest. The isolating of a series of phenomena to one particular field of relations may defeat the very purpose of useful knowledge, for the aspects ignored are often those which alone make the subject of interest or value to us. In the preface to his recent work, *Outlines of Psychology,* Prof. Royce tells us: "I presuppose, then, a serious reader, but not one trained either in experimental methods, or in philosophical inquiries. I try to tell him a few things that seem to me important, regarding the most fundamental and general processes, laws, and conditions of mental life. I say nothing whatever about the philosophical problem of the relations of mind and body, and nothing about the true place of mind in the universe. Meanwhile, I try to view the matter here in question in a perspective which is of my own choosing." But the serious reader, if not a pure scientist, will probably care most for the problems the author proposes to omit, and the true place of mind in the universe

will seem to him the one problem of supreme and decisive import to thinking men.

The radical defect in this purely quantitative study of nature is that it ignores the inner side of experience which, despite the scientists' claim, is not expressible in terms of quantity. The very mind which marvelously reasons out great scientific principles is treated as secondary to sense-impressions. It is somehow the product of the very processes which it reveals and explains. But to the thinker, as distinct from the mere observer and classifier, it is obvious beyond question that mind and will form the crown and consummation of the whole evolution, and that we must interpret the process in terms of the mental reality it ends in, and not in terms of the physical elements with which it began; each phenomenon must be classified and estimated by its outcome, not according to the formless germ of its beginning. Professor James emphasizes the necessary incompleteness of pure physical research by telling us that the actual world we live in is largely a construction of our own minds in the interest of heart and will, and in this many-sided world there are many subordinate worlds of thought and experience besides the world of science, such as the worlds of history, literature, art, philosophy and religion, which are all real to the mind.

Qualitative relations must be neglected, but it is in precisely such relations that man has his life and being. Pure scientists are sadly liable to what may be called the fallacy of the half-truth, and to resting content with it. The tragedy of such a situation is not merely that the half-truth is substituted for the whole, but further enquiry is suspended, and that which should be a transitory stage is complacently regarded as the journey's end. This is the attitude of the scientific agnostics. A leading biologist, writes Professor James, once said to him, "that if such a thing (as telepathy) were true, scientists ought to band together to keep it suppressed and concealed. It would undo the uniformity of Nature, and all sorts of other things without which scientists cannot carry on their pursuits." His interest in science prejudiced him against anything which

threatened to overthrow its conclusions, even though that something were truer than his science. He could apperceive as science only facts of a certain order. But how can a man know that the truth which he possesses is *only* a half-truth? Only through preserving a spirit of open-minded tolerance which strives to maintain a sympathetic attitude to opposing opinions. "It must never be forgotten," said Sir William Crookes, "that theories are only useful so long as they admit of the harmonious correlation of facts into a reasonable system. Directly a fact refuses to be pigeon-holed, and will not be explained on theoretic grounds, the theory must go, or it must be revised to admit the new fact."

Another fallacy of scientific reasoning, peculiar to those trained in biology, is to think that if a thing can be traced back to its beginnings, we will find in the initial stage its complete explanation. This is the cry of the evolutionists, whatever be the subject under discussion, whether it be an animal, or a religion, or the solar system. The original germ is the sufficient key to all future developments. But the germ, even if we isolate it, is never self-illuminating. We are at a loss to interpret its significance. It is the mark of a real cause to hide itself. It contains unseen potentialities which come into actuality only through the course of its development. One would think this would be self-evident. I find a new seed; no microscope can penetrate its secret. The only way to learn its nature is to plant it in good soil and await its growth. The seed does not explain the plant, but rather the plant explains the seed. Still less is man satisfied with that account of his nature which refers him to his beginnings, and traces his line of descent to certain ape-like ancestors or, to go to the last stage in this regress, to the primal chemical elements to which his organism may be reduced. Is man as we know him satisfactorily explained by such beginnings? It must not be overlooked that, in that elemental stage, there must have been a potential factor which is not in any one of the original parts but pervades them all, which elevates the material whence man arises, which transforms the beast into the savage, and the

savage into the civilized man. This factor will never be revealed to the senses, and yet we know that it is the ultimate source and cause of man's true being.

The most obvious and fatal defect in purely scientific study is that it treats a series of phenomena or motions in the ether as an end in itself, whereas on the human side, it is always a definite means to a definite end. Science can tell us much about the speed of the undulations in the ether, and their wave lengths, but it knows nothing of their meaning to the conscious personalities who cause the undulations in order to express their thoughts. This meaning, then, is the vital thing, not the etherial motions in themselves. The same trumpet may peal forth notes not differing much to us, but the effect is vastly different to those who know the meaning of the calls; in one case the cavalry suddenly mount and charge the enemy, in the other case the call to quarters sends them to their tents and welcome rest. Think of the wonderfully simple apparatus of the wireless telegraph which sends forth pulsating circles of Hertzian waves, repeating S. O. S., and mighty steamers come from every side to the help of their sinking consort leagues away. In the presence of such obvious facts we can but wonder that all psychologists do not agree with Stout that the central interest of psychology consists in the study of mental development as the realization of conscious purpose, or with Bradley who holds that mental development coincides with the evolution of the meaning of things.

The actual universe, described in terms of evolution, is a universe which manifests purpose and which ends in a multiplicity of natural goods with consciousness as the apex. No account of the evolution of the cosmos merely in terms of the redistribution of matter in motion tells the whole story, if it ignores the cardinal fact that the process culminates in consciousness and produces the world of moral values in and by which we live and act as men. History is the record of the wonderful life and action of humanity, including the subjection of the forces of nature to the use of man. It is this marvelous fact of consciousness in personal relations with

other persons which alone justifies the existence of the vast mass of rock and water and air which we call the earth.

The final end must be the creation of spiritual beings, able to know and love their Creator. Otherwise God becomes merely the Infinite Power, creating great masses of matter, and whirling celestial fireworks, all to no purpose. Reason itself rejects such a waste of orderly system. From this point of view the final cause could never be the world of quantity but only of quality, which belongs not to matter but to personality; the whole physical universe exists only for spirits; it is subordinate and secondary, a means to a divine end. Physical science magnifies the universe of matter, and tends to dwarf man into nothingness, but a moment's thought should show us that the mind which analyzes the starry universe, studies its order, reads its laws, predicts its motions, and reveals its very material, is the greater; a part of God's own knowledge.

"Yet what availed, alas, these glorious forms of all creation?
None to behold and none to enjoy and none to interpret.
What could reflect, though dimly and faint the ineffable purpose,
Which from chaotic powers order and harmony drew?
What but the reasoning Spirit, the Thought and the Faith and the Feeling?
What but the grateful Sense, conscious of Love and Design?
Man sprang forth at the final behest — Nature at length had a Soul."

But the darkest hour is past and the dawn of a saner and wider outlook on life is plainly at hand. On every side scientific as well as philosophic thinkers are plucking up courage to revolt against the sacred idol of the academic cave, the bloodless abstraction of the Pure Reason, which, whether conceived in the terms of Hegel or of Spencer, "grinds out good and grinds out ill, and has no purpose, heart or will."

William James in *The Will to Believe* emphasizes the necessary one-sidedness of pure science. Ostwald of Leipzic in his address on *Scientific Materialism* protests against the mechanical conception of Nature, that all things consist of moving atoms, that matter and motion are ultimate conceptions, and there is nothing beyond them. "It must," he says, "be

noted that it has proven impossible to express all the relations involved in nature by a corresponding mechanical system so that nothing has been left unaccounted for." Professor Boltzman could write even some time ago: "An almost exaggerated criticism of the methods of scientific investigation is indeed characteristic of the present day. . . . The mechanical theory, in fact, is no longer the sole possible outlook, reached once and for all; it is no longer held absurd to speculate about its replacement by a better." Pearson tells us, "The obscurity which envelopes the *principia* of science is not only due to an historical evolution marked by the authority of great names, but to the fact that science, as long as it had to carry on a difficult warfare with metaphysics and dogma, like a skilful general conceived it best to hide its own deficient organization. There can be small doubt, however, that this deficient organization will not only in time be perceived by the enemy, but that it has already had a very discouraging influence both on scientific recruits and on intelligent laymen." [5] Karl Heine in 1903 stated that many scientific investigators have undergone changes in their fundamental views through the growing conviction that we are confronted with the complete breakdown of the naturalistic world-view.

Among others we might name as constructive critics such Germans as Mach, Oscar Hertwig, Reinke, Driesch, Fr. Ludwig, Höffding, and von Hartmann, while in France there is a movement toward the philosophic criticism of science headed by Poincaré. In philosophy Eucken and Bergson have completely rejected materialism.

[5] *Grammar of Science*, p. x.

CHAPTER XII

NATURALISM

NATURALISM holds that nature, the world of phenomena, of things sensible, is the one and only reality. It claims that we know nothing beyond Nature. God, therefore, is an illusive fancy, or a synonym for the sum total of all mechanical forces. Thought is a mere product or accompaniment of certain forms of motion in nervous matter, from which it is inseparable. Psychology is a branch of physiology, and that is a form of mechanics. Man, therefore, is a helpless automaton.

These are the main propositions of naturalism. They are most repulsive to normal minds, but they seem self-evident to those who live solely in the realm of the senses. In its older form, Materialism, this philosophy was a blunt denial of all the higher aspects of life and thought, and had many outspoken advocates in Germany and England, who showed a brutal contempt for man. Thus Carl Vogt wrote in his *Lectures on Man:* "We shall give weight to the anatomical characters above everything else. At philosophical and religious arguments, by which even naturalists sometimes endeavor to support their systems, we shall only cast occasional glances." [1] In other words, to him and his school man is an animal. Haeckel tries to disguise the harsh features of his system by calling it "monism," and using vague spiritualistic terms. His *Riddle of the Universe* has had an enormous circulation in cheap editions throughout England and America. He is more dangerous than Herbert Spencer, for he is clearer, and in this one volume he covers the whole field of thought. He deals not merely with biological evolution but with the nature, embryology, and philogeny of the soul; with the evolution of the

[1] p. 133.

world; with religion and ethics. He furnishes a good example of how some scientists waive away laymen from their bailiwick but yet do not hesitate to dogmatize in the fields of ethics, philosophy, and religion, about which they know little or nothing. The conclusion of the book gives his views in summary. "From the gloomy *problem* of substance we have evolved the clear *law* of substance. The monism of the cosmos which we establish thereon proclaims the absolute dominion of 'the great eternal iron laws' throughout the universe. It thus shatters, at the same time, the three central dogmas of the dualistic philosophy — the personality of God, the immortality of the soul, and the freedom of the will. . . . The advance towards the solution of the fundamental riddle of the universe, is brought nearer to us every year in the ever increasing growth of our knowledge of nature. We may, therefore, express a hope that the twentieth century will complete the task of resolving the antitheses, and, by the construction of a system of pure monism, spread far and wide the long-desired unity of world-conception." In this he is doomed to disappointment, for the real thinkers of today are turning rapidly toward idealism. Haeckel himself admits that many German scientists have deserted him, such as du Bois-Reymond, Wundt, Hertwig, and Driesch. Sir Oliver Lodge gives his present standing graphically: "He is, as it were, a surviving voice from the middle of the nineteenth century; he represents, in clear and eloquent fashion, opinions which then were prevalent among many leaders of thought — opinions which they themselves in many cases, and their successors still more, lived to outgrow; so that by this time Professor Haeckel's voice is as the voice of one crying in the wilderness, not as the pioneer or vanguard of an advancing army, but as the despairing shout of a standard bearer, still bold and unflinching, but abandoned by the retreating ranks of his comrades, as they march to new orders in a fresh and more idealistic direction." [2]

Though the older materialism is on the rapid decline among

[2] *Life and Matter*, p. 51.

men of science, and they refuse to commit themselves, preferring to remain agnostics, yet the presuppositions of physical science, which confines certain knowledge to the world of the senses, tend to create doubt of other aspects of truth and faith. Eucken warns us plainly that "the power that has conquered Nature, by understanding her and harnessing her powers to its own ends, may find itself vanquished in its most inward selfhood by the very Nature it has conquered. The natural, brought to self-expression by man's spiritual effort, brings its own systematized power to bear upon the mind that called it forth, and unless adequately resisted and controlled, asserts its real independence by invading, possessing, and naturalizing the spiritual life." [3]

The fundamental thesis of empiricism remains as strongly entrenched today as ever, or rather more so because of the wonderful triumphs of physical science. This thesis is that we can know nothing which is not revealed by the senses or, if imagined as an hypothesis, cannot be scientifically proven. It is not hard to see how this threatens all the higher interests of life, if the followers of Naturalism are consistent. They are not, however, for they claim the right to search for a meaning to things revealed by the senses, and thus pass over into the idealistic position. This is a thoroughly inexcusable proceeding, for no mere sense data ever conveyed any meanings, and all cosmic systems constructed by Naturalism are as mechanical as the material elements which went into them. Spiritual facts are not tangible to the senses, so that when the generalizations of Naturalism are finished, it is no wonder that all spirit, either God's or man's, is left out of the resulting "whole."

"Law is God, say some: no God at all, says the fool;
For all we have power to see is a straight staff bent in a pool." [4]

There are really two forms of naturalism which are usually hopelessly tangled in the average mind. One form comprises

[3] W. R. Gibson, *Rudolph Eucken's Philosophy of Life*, p. 136.
[4] Tennyson, *The Higher Pantheism.*

a large number of ideas which are in themselves poetical or even mystical. This type does not by any means set itself against religion, rather does it apotheosize and worship nature. It almost invariably develops into pantheism. This union of religious emotion with naturalistic principles may even become quite devout and claim that it denies only the transcendent and not the immanent God. It is well expressed in Goethe's lines:

> "What God would *outwardly* alone control,
> And on His finger whirl the mighty Whole?
> He loves the *inner* world to move, to view
> Nature in Him, Himself in nature too,
> So that what in Him works, and is, and lives,
> The measure of His strength, His spirit gives."

The true naturalism, however, scouts all these naïve and religious sentiments, and deals only in exact science and mathematical-mechanical calculations. The supernatural is eliminated from nature so that all its phenomena may be traced back to simple, unequivocal, and easily understood processes, and the conclusion is reached that everything happens "by natural means." Naturalism of this type is sharply antagonistic to and works against the very motives which are most vital to the poetic and religious form.

Otto shows how difficult it is to separate these forms from one another: "Much as they differ from one another in reality, they are very readily confused and mixed up with one another. And the chief peculiarity of what masquerades as naturalism among our educated or half-educated classes today lies in the fact that it is a mingling of the two kinds. Unwittingly, people combine the moods of the one with the reasons and methods of the other; and having done so they appear to themselves particularly consistent and harmonious in their thought, and are happy that they have been able thus to satisfy at once the needs of the intellect and those of the heart. On the one hand they stretch the mathematical-mechanical view as far as possible from below upwards, and even attempt to explain the activities of life and consciousness as the results of complex reflex mechanisms. And on the other hand they bring

down will, soul, and instincts into the lowest stages of existence, and become quite animistic. They wish to be nothing if not 'exact,' and yet they reckon Goethe and Bruno among the greatest apostles of their faith, and set their verses and sayings as a *credo* and motto over their own opinions. In this way there arises a 'world conception' so india rubber-like and Protean that it is as difficult as it is unsatisfactory to attempt to come to an understanding with it. If we attempt to get hold of it by the fringe of poetry and idealism it has assumed, it promptly retires into its 'exact' half. And if we try to limit ourselves to this, in order to find a basis for discussion, it spreads out before us all the splendors of a great nature pantheism, including even the ideas of the good, the true, and the beautiful. One thing only it neglects, and that is, to show where its two very different halves meet, and what inner bond unites them. Thus if we are to discuss it at all, we must first of all pick out and arrange all the foreign and mutually contradictory constituents it has incorporated, then deal with Pantheism and Animism, and with the problem of the possibility of 'the true, the good, the beautiful' on the naturalistic-empiric basis, and finally there would remain a readily grasped residue of naturalism of the second form, to come to some understanding with which is both necessary and instructive." [5]

This residue has crystallized into certain definite theories which can be dealt with separately. By finding the difficulties which vitiate and destroy these theories we may the more readily see the falsity of the naturalistic position.

Difficulties of Naturalism

1. *Assumptions of matter and energy*

The first difficulty is the most fundamental, for it inheres in the question of origins, namely the assumptions the naturalist has to make to get started on his reasoning. Du Bois-Reymond denies that such men as Haeckel can so easily prove their position, because they have to posit something at the start and then argue from their assumptions. They do not start at the be-

[5] *Naturalism and Religion,* pp. 28, 9.

ginning of things where the trouble really lies. He proposes "seven world-riddles," which have yet to be solved, showing that the mechanical world-view breaks down at as many points. The appearance of the new planes and classes of phenomena are inexplicable on purely mechanical principles. These enigmas are the existence of matter and force, the origin of motion, the appearance of design in nature, the beginning of life, the existence of consciousness as simple feeling, the appearance of self-consciousness as intelligent thought and the origin of speech, and finally the freedom of the will. He admits that neither he nor any one else can explain how these breaks were bridged, and says that thinkers have no right to posit their own views as proven facts from which they can then argue.

Without going into all the assumptions necessary at each of these breaks in the process of cosmic development, let us confine our attention to the two primary ones which all materialists have had to make from the days of Democritus and Epicurus to the present. These are matter and motion, or to combine them, as is necessary, matter in motion. Naturalism holds that since all particles of matter are now in a state of incessant motion, we must assume, by the law of inertia, the eternal existence of infinite energy. But such a primal force cannot be proved. If it is gravitation, as some hold, how can we explain the rise of the present manifold forms of energy? Thus if we start with matter in motion, the question still remains, whence came the motion?

Further, whence came the matter? It does not help to have Naturalism declare, "Matter has existed from all eternity, and is the mother of all things. Out of it the world has formed itself. From the inherent qualities of matter have emanated the changeless laws by which the world is maintained." We ask, if primitive matter was discrete, how did atoms arise of themselves? If not discrete, but absolutely homogeneous, what caused the present definite varieties? If the atoms, at their first appearance, had "inherent qualities" they must have received them from some source not mechanical.

The new theories of matter propounded in the light of the discoveries of radio-activity make strongly against naturalism, and will receive full treatment in the next chapter. It is sufficient here to comment that as atoms are compounds composed of a multitude of electrons or electric charges, infinitesimal in size and " cosmic " in velocity, which revolve in complex orbital motions, we have yet to account for their origin. The Divine Will (for will is force) must impress upon them the combinations in number, form, and motion which determine the properties peculiar to each kind of atom. Helmholtz accepted the earlier dynamic theory of matter and explained mechanical action on the vortex theory. Asked after a lecture, " Who made the vortices? " he replied, " God."

2. Effect greater than cause

The second difficulty is the naturalistic theory of the development of the heterogeneous out of the homogeneous. Its best exponent is Herbert Spencer. His *First Principles* is an ambitious attempt to explain the Universe under mechanical formulæ, such as the Persistence of Force, the Instability of the Homogeneous, the Multiplication of Effects, etc.— which themselves need to be justified, and are a begging of the question. Despite his affirmation of the Infinite and Eternal Energy, forever unknowable, he wrote on purely materialistic lines. He applied the idea of evolution to the inorganic world and defined cosmic evolution as a continuous change from an indefinite, incoherent homogeneity to a definite, coherent heterogeneity by continuous differentiations and integrations.

To the natural question of what began the transformation of the homogeneous into the heterogeneous, Spencer returns the surprising answer that it is a fundamental law that the homogeneous is instable. But if there is anything settled by experience and theory it is that a perfectly homogeneous body of matter, *e.g.*, a gas of even temperature and density, would remain absolutely stable, unless disturbed by some outside force. However, in his scheme the force is all within ; the homogeneity is absolute; the mass is incoherent, dissociated, each portion

exactly like all the others; and the force is evenly distributed and at rest. All thinkers know that out of such matter nothing could arise except by the action of some force, which we can only call creative. Spencer feels the difficulty, and begins at once to qualify his first statement, for he tells us that the homogeneous mass is in a condition of instable equilibrium, and that some rearrangement must result. But why, if the mass is *really* homogeneous? Again, mere persistence of force of any kind or quality guarantees no order or progress. In itself it would be as likely to wreck a world as develop one. To accomplish anything, forces must be directed to a definite end which determines the results of their action.

Spencer holds that in the conflict of matter and force both are at first uniform. We have a multiplicity of effects from the one force, and the force itself is correspondingly differentiated into a group of dissimilar forces. This principle of the multiplication of effects brought him into conflict with the logical principle of "like causes like effects," *i.e.*, that cause and effect are on the same plane, quantitative force equals quantitative effect, chemical equals chemical, life springs out of life, mind acts on mind, etc. But in any scheme of unbroken evolution you have to slur over these differences and glide from one class or order of things to another, by imagining them to approach each other, till the difference is imperceptible.

We are coming to see with Sigwart that "the thought of development has sometimes been treated like a logical charm by means of which we may explain without difficulty hitherto inexplicable phenomena," [6] and are no longer easily subject to its subtle influence.

3. *Problem of Life*

The weakness of naturalism appears most plainly when we study its attempts to explain life and consciousness in purely mechanical terms. The problem of life is the crux of naturalism. Biogenesis, the hypothesis that living matter always arises from living matter, is a scientific axiom; yet some writers

[6] *Logic*, Vol. II, p. 475.

today try to persuade us otherwise. Statements like this are current in magazine articles: "Every scientist with a wide grasp of facts, who can think clearly and without prejudice over the field of what is known of cosmic evolution, must be driven to believe that the alleged wide gap between vital and non-vital matter is largely a figment of prejudiced human understanding."

How little true this is of the views of the best scientists is shown in the case of Professor Haldane, who draws the conclusion that not by any possibility can the mechanistic conception of life be true: "The physical and chemical conception of the world breaks down absolutely and hopelessly in connection with the phenomena of life, however useful it actually is in connection with inorganic phenomena. It is, therefore, nothing but a working hypothesis of limited useful application." [7] Bergson points out clearly that physical science can deal only with spacial relations, while the study of life demands the consideration of temporal relations as well. Lord Kelvin writes in the same vein, "The properties of living matter distinguish it absolutely from all other kinds of things, and the present state of our knowledge furnishes no link between the living and the non-living." And Professor Burdon Sanderson tells us that "the mystery is the more profound the more it is brought into contrast with the exact knowledge we possess of surrounding conditions." [8]

The attempt is constantly made to bridge over the chasm by the "fallacy of the imperceptible." Yet the tiniest drop of protoplasm with the potentiality of growth is as much a new thing as the grown animal would be. As Professor Carl Hauptmann puts it, "The most primitive life, from which alone the living world on this earth can have sprung, can only be assumed to be a species, the members of which varied in manifold ways and propagated themselves. Here we have to do already with an eminently complex interaction of elementary processes. . . . The origin of the simplest living substance is mechanically

[7] *Mechanism, Life and Personality*, p. 135.
[8] *Brit. Assoc. Report*, 1889, p. 614.

quite unknown and uncomprehended." [9] "It may be broadly said," Oscar Hertwig stated to the congress of scientists at Aachen in 1900, "that, in spite of all the progress of science, the chasm between living and lifeless nature, instead of gradually closing up, has, on the contrary, become deeper and wider." [10]

It is a recognized fact today that there is no such thing as a physical basis of life, a kind of unorganized matter out of which life arises *de novo*. The simplest form of life which we know, the cell, is itself organized matter. It is not structureless, as used to be said, but has its definite parts present and packed away so to speak, waiting to develop, like the pupa in the chrysalis. The cell is an organism from the first according to its own inherent law. Professor Wilson writes, "The study of the cell has on the whole seemed to widen rather than to narrow the enormous gap that separates even the lowest forms of life from the inorganic world." [11]

"In all cases whether the cell-unit lives freely as a unicellular organism, or forms an integral part of a multicellular individual, it exhibits in itself all the phenomena characteristic of living things. Each cell assimilates food material, whether this is obtained by its own activity, as in the majority of the protozoa, or is brought, as it were, to its own door by the blood-stream, as in the higher metazoa, and builds this food material into its own substance, a process accompanied by respiration and excretion and resulting in growth. Each cell exhibits in greater or less degree 'irritability,' or the power of responding to stimuli; and finally each cell, at some time in its life, is capable of reproduction. It is evident therefore that in the multicellular forms all the complex manifestations of life are but the outcome of the coordinated activities of the constituent cells. The latter are indeed, as Virchow has termed them, 'vital units.' In writing on physiology Verworn tells us, 'It is to the cell that the study of every bodily function sooner or

[9] *Die Metaphysik in der Modernen Physiologie*, p. 386.
[10] *Report of the Smithsonian Institution*, 1900, p. 465.
[11] *The Cell in Development and Inheritance*, p. 330.

later drives us. In the muscle cell lies the problem of the heart beat and that of muscular contraction; in the gland cell reside the causes of secretion; in the epithelial cell, in the white corpuscle, lies the problem of the absorption of food, and the secrets of mind are hidden in the ganglion cell.' So also the problems of development and inheritance have shown themselves to be cell problems, while the study of disease has produced a 'cellular pathology.' The most important problems awaiting solution in biology are cell problems." [12]

Peculiar Properties of Living Things

1. Living substance is composed of cells organized with nuclei and ready to develop at once on fertilization. The marvelous regularity of cell division in all its parts according to the nature of the particular organism has already been sufficiently described, and does not need repetition here.[13] This apparently shows that living substance is dominated by an inner directive force which determines its whole development from the very first.

2. Living substance has the power of self motion, and responds to external stimuli, but in varying ways, adjusting itself to the environment and ignoring the law of mechanics that action and reaction are equal. The most obvious distinction between the organic and inorganic lies in the fact that the organic is not passive under the impact of external force, but responds with the play of counter forces which are essentially its own. Organic bodies are not simply moved; they move themselves. They are so constituted that even when an external force acts as an excitement or a stimulus, the organic forces which emerge and act are more complex and important. Plants react, though reaction is naturally more decided in the case of animals. The sundew catches flies, and its tentacles will even reach out half an inch to seize a fly fixed at that distance from it, but not touching it. The tendrils of climbing plants, such as the pea, show that they can feel things at a distance and move toward them. A trailing cactus on a galvanized iron roof has been observed to drop its roots through a hole to the ground twelve feet below. Among unicellular organisms the behavior is not a set, forced method of reacting to each particular agent, but takes place in a much more flexible, less directly machine-like way, by the method of trial and error. There is also the response to stimulus within the organism; *e.g.*, medicine will be absorbed by the particular tissue or organ injured, and other tissues will reject it. Living substance con-

[12] *Ency. Brit.*, 11th Edit., Vol. VII, p. 710.
[13] See Note J.

tains energies which, without contradicting the general laws of physics and chemistry, nevertheless give a special expression to its reactions.

3. Living substance assimilates food from without, and grows. Because we can produce in the laboratory some of the products of plant life, such as indigo, some chemists claim that the plant also uses only chemical forces, and some day we will succeed in making life. But Professor Bunge reminds us that, "All our artificial syntheses can only be achieved by the application of forces and agents which can never play a part in vital processes, such as extreme pressure, high temperature, concentrated mineral acids, free chlorine — factors which are immediately fatal to the living cell. . . . It follows that the animal body has command of ways and means of a totally different character, by which the same object is gained."[14] Claude Bernard similarly comments that "The chemistry of the laboratory is carried on by means of reagents and apparatus which the chemist has prepared, and the chemistry of the living being is carried on by means of reagents and apparatus which the organism has prepared."[15] Thus it would seem that no outside force could ever manufacture living things.

4. The power of reproduction of living substance implies a continuous relation to the future. The whole embryonic development is prophetic of future conditions not yet in existence. This is more evident the higher up in the scale of life we go. Grown animals make definite provision for their young. Reproduction is itself a profound mystery. How heredity acts in transmitting qualities baffles our thought, for it is "the greatest marvel of biological science."[16] Every effort to discover an intelligible bond connecting the marvelous diversity of living forms and their development, leaves the investigator facing a metaphysical fogbank, impenetrable to thought. A multitude of biologists offer theories of all kinds, but they remain only so many words, because in the nature of the case they can report only the changes they see taking place under the microscope; the forces at work escape them.

5. Each organism is a perfect unity in which the whole dominates the part, and uses it for its own good. Some organizing force must coexist with all living organisms from the cell onward. This force must precede the coordination of the organism — life, therefore, is the cause of the special growth which it develops. Each kind of life has its own definite form, and has not only a power of growth, but also a power of recovery, of healing wounds and fighting disease. Nothing could be more remarkable than the restorative powers of a body by means of which many organs are reproduced and cells are put to a different use from that previously subserved. Multicellular structure is not essential

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[14] *Physiological Chemistry,* p. 313.
[15] *Rapport,* p. 133.
[16] Wilson, *The Cell in Development and Inheritance,* p. 295.

for complex regional differentiation. In fact this differentiation may be foreshadowed in the egg before cleavage begins. The mode of cleavage may be artificially altered, as Driesch has shown, without affecting the ultimate organization of the embryo. These and many similar observations tend to emphasize the importance of the "organism" itself in contradistinction to the cell. The increasing frequency with which protoplasmic continuity is being demonstrated between all kinds of cells is a fact tending in the same direction. "As far as the plants are concerned, however, it has been conclusively shown by Hofmeister, De Bary, and Sachs that *the growth of the mass is the primary factor;* for the characteristic mode of growth is often shown by the growing mass before it splits up into cells, and the form of cell division adapts itself to that of the mass: 'Plants build cells, cells do not build plants' (De Bary)."[17] The living organism can use and direct the action of natural forces within itself for its own benefit, as certainly as it does use the processes of nature for its own purposes as food. Sandeman has published a strong protest against the tendency to treat the organism as only a complex case of the inorganic, a mere aggregate of parts, ignoring the unity, the individual wholeness, which is characteristic of life, whether or not we can comprehend it.[18]

From these peculiar properties of living things, and others which could be mentioned, it is evident that life is distinct in its working and effects from physico-chemical force. The easy identification of the principle of life with an "allotropic form" of physical force customary in the days of Tyndall and Huxley, has been discarded, even by Herbert Spencer.[19]

During the latter half of the nineteenth century theories of the mechanist type prevailed almost without question among biologists. Recently, however, they have been questioned by a considerable group, to whom the name of neo-vitalists has been given. Among them are such men as Professors Driesch of Heidelberg, Wolff of Basle, Reinke of Kiel, Neumeister of Jena, and Schneider of Vienna. These men hold that although we have succeeded in determining the physical or chemical factors that enter into many of the phenomena of life, and in analyzing the conditions necessary or useful in the

[17] Wilson, *The Cell in Development and Inheritance,* p. 293.
[18] *Problems of Biology.*
[19] For Spencer's views see Note T.

accomplishment of certain functions, we have not yet accounted for a single vital phenomenon solely by the combination of inorganic activities, considering it as a whole and taking into account the characteristics that distinguish the organic from the mineral kingdom. Such phenomena, for example, are the elaboration of chlorophyl in the green leaf and the division of the nucleus in cell-growth. These authors therefore regard the whole mechanist attitude as unauthorized, and assert that we must either admit the hypothesis of a vital principle or at least grant that the vitalist interpretation is as likely to be true as the other.

Thus, while life has processes that are distinctly physico-chemical, it is not itself such a process, or even the sum of such processes. It is an idea — a tendency — something higher than and apart from physics and chemistry. Claude Bernard recognized and well described this characteristic of life. "Life," he said, "is an *idea:* it is the idea of the common result for which all the anatomical elements are associated and disciplined; the idea of the harmony that results from their concert, of the order that reigns in their action. The living machine is characterized, not by the nature of its physico-chemical properties, but by the creation of the machine according to a definite idea. This grouping takes place according to the laws that govern the physico-chemical properties of matter, but what is essential to life's domain, which belongs neither to physics nor to chemistry, is the directing idea of this vital evolution." Bergson brings this out clearly in showing that each living thing is an individual: "The living body has been separated and closed off by nature herself. It is composed of unlike parts that complete each other. It performs diverse functions that involve each other. It is an *individual;* and of no other object, not even of the crystal, can this be said, for a crystal has neither difference of parts nor diversity of function."[20] His view of life is that it is creative evolution, ever causing new forms.

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[20] *Creative Evolution,* p. 12.

There is a tendency among biologists to agree in the view that, although vital force itself is not a form of physical energy, it does direct or possibly transform energy to its own use. A few quotations will show this. Professor F. R. Japp declares, "I see no escape from the conclusion that, at the moment when life first arose a directive force came into play." [21] Professor Kerner von Marilaun writes, "This force in nature is not identical with any other natural force, for it manifests a series of characteristic effects which differ from those of all other forms of energy. Therefore I do not hesitate again to designate as vital force this natural agency, . . . whose immediate instrument is the protoplasm, and whose peculiar effect we call life." [22] Professor Virchow writes similarly, "We cannot see how the phenomena of life can be understood simply as an assemblage of the natural forces inherent in those substances; rather do I consider it necessary to distinguish as an essential factor of life an impressed derived force in addition to the molecular forces. I see no objection to designating this force by the old name of vital force." [23] Sir Oliver Lodge considers it a fact that life itself is a guiding principle, a controlling agency using existing forces, *i.e.*, that a plant can guide and influence the elements of inorganic matter and build them up into definite forms which live as aggregates, until they are abandoned by this controlling power, when they fall quickly into decay.

The whole fallacy of the naturalist lies in the assumption that purely physical science, descriptive and mathematical, covers the whole universe. We admit that in biological science the development depends on the environment for successful movement; we will even admit that nothing *new* is added to the environment, the sum of energy and matter remain constant. But we must agree, before we go any further, as to what the environment contains and embraces. We decline to believe that modern science has sounded the depths of the

[21] *Brit. Assoc. Report,* 1898, p. 818.
[22] *The Natural History of Plants,* Vol. I, p. 52.
[23] *Old and New Vitalism.*

universe and translated all its contents into mechanics. It cannot even explain the acorn which grows into an oak, which is said to be "higher" than manure and soil by the properties of which it is raised up. The acorn does not contain the *matter* which goes to form the oak tree. It simply forms the cradle of a germ-cell of a certain definite kind of living thing. It does not create that vast bulk of matter. It takes it in and transforms it. There is a marriage between that lowly life-cell and the whole universe of force and matter, and the oak tree is the product, whose form and qualities are all laid down in the tiny active germ in the acorn.

But whence comes this marvelous life force? Certainly not from the manure and soil. If we admit that the material tree grew by drafts on the material environment, matter being always present, why not say also that the center of life in the germ draws its existence and continuance from the ever present environment of unseen life — from the Spirit — the Lord and the Life-giver? If life-force suddenly arises out of matter hitherto controlled by purely physical forces, or if intelligence and will — very intense forms of consciousness — arise out of dull sensations in animals, this means that a great addition of power of a higher grade is made to the total power in the universe. This increase must be either self-caused — which the law of energy forbids — or it must be drawn out of a greater environment than the sensible air or heat or soil — from a reservoir of Life and Mind, encompassing and permeating the earth. No one can explain it in the face of all the evidence by declaring that the higher comes out of the lower by simple development. The absolutely new force demands a new and corresponding force as cause and environment.

4. *Problem of Consciousness*

The last difficulty of materialism of which we shall treat is the problem of consciousness. Modern materialism, philosophic or scientific, postulates the impossibility of thought without the brain, and divides into four schools concerning the relation between the two.

1. *Crude materialism.* Thought is a secretion of the brain; in Carl Vogt's words, "as contraction is the function of muscles, and as the kidneys secrete urine, so, and in the same way, does the brain generate thoughts, movements, and feelings." No lengthy discussion is necessary, for this theory has no support from modern psychologists of established rank. It is sufficient to comment that thought and feeling are not objects or movements in space and cannot be so pictured. We know them not by external intuition, as this theory would demand, but by self-perception and self-consciousness. That which has not the properties of the material cannot be the form of activity of something which is material. Activity of consciousness and cerebral function always come to be known through different sources of experience. The fallacy of this form of materialism consists in the fact that it effaces this essential distinction.

2. Another theory is that thought is a *transformation of physical force,* resulting from a peculiar mode of motion of the particles of the brain. Consciousness is not a product of the same kind as the matter which produces it; it is a transformation of the physical forces liberated in the brain by the interaction of its parts. We have in it simply a more striking instance of that transmutative process by which a current of electricity, passing through a carbon filament is changed into light. Few psychologists accept this view, as they incline to deny any interrelation between mental and bodily experiences.

Spencer took this position in his *Psychology,* holding that nervous shocks are primordial and irreducible elements of consciousness. In his *First Principles* he had previously written: "That no idea or feeling arises, save as a result of some physical force expended in producing it, is fast becoming a commonplace of science; and whoever duly weighs the evidence will see, that nothing but an overwhelming bias in favor of a preconceived theory, can explain its non-acceptance." [24] He bases this on the law of transformation and equivalence of forces, that the thought or consciousness itself, as distinct from motion

[24] § 71.

in brain or nerves, must be a form of physical energy, passing on what it has absorbed, for no energy can disappear or cease to be. To take a concrete illustration. The same current of force which was a vibration of the ear drum when the door bell rang, passes on as a mode of motion in the auditory nerve, then takes on a mental form and becomes a thought, after which it changes back into a physical force, passing down the motor nerves and setting the body in motion to go to the door. Consciousness is a link in this chain, receiving its energy at the expense of the auditory nerve, and in turn liberating to its successor the energy it held for a brief moment.

"Does a given quantity of motion disappear to be replaced by an equivalent quantity of feeling?" asks John Fiske, and answers, "By no means. The nerve motion in disappearing is simply distributed into other nerve motions in various parts of the body. Nowhere is there such a thing as the metamorphosis of motion into feeling, or of feeling into motion." [25] And Höffding has a similar comment. "If, then, there is a transition from physiological function to psychological activity, from body to mind, physiology, at any rate, working with its present method, can not discover it. . . . So far as we can speak of final results in the physiology of the brain, this represents the brain as a republic of nerve centers, each with its function and all in interaction; but there is nothing to indicate the possibility of the physiological process breaking off at any point to pass into a process of a wholly different kind." [26]

The assumption that every mental state has its equivalent in a corresponding physical force previously expended, though taken as a postulate in laboratory work, is incapable of verification, for that work is concerned purely with the measurement of nerve motion, whereas thought does not move and cannot be measured. Mind responds to stimulus, but it responds in the most varied and often unexpected ways; action and reaction are not identical in this field as they are in nature. Laboratory experiments are useful only for giving us the in-

[25] *Essay on Darwinism*, p. 73.
[26] *Outlines of Psychology*, pp. 57, 8.

tensity and force and time of nerve movements, but the thoughts in the subject are not revealed at all. The fact, on the contrary, is that physical stimuli, sounds, touch, words, etc., affect various persons differently according to their mental state and attitude, whereas forces acting on matter must have definite reactions. That which determines the strength of the mental impression is not the amount of incident physical force, but its intellectual significance for us. A passing shadow or a mere whisper of vital news may frighten some people into convulsions, while on the other hand a crash of thunder may not disturb the student engrossed in his studies, or the roar of cannon a soldier full of the excitement of battle.

3. *Pan-psychism.* All matter is "ensouled" by different forms and degrees of energy, *e.g.,* atomic motion, chemical affinities, vital forces. Out of these by simple development springs the higher soul activity in the brain, which we call consciousness. Professor Clifford states it without disguise: "Molecules of matter are devoid of mind, but they possess small portions of mind-stuff, and when these particles get combined in a certain way thought and consciousness arise."[27] That is to say, the profoundest element in all experience arises out of material particles which themselves have no consciousness. Other leading supporters of this view are Haeckel and Paul Carus. Professor William James exposes the theory in all its naked absurdity, and to his chapter on "The Mind-Stuff Theory" in his *Principles of Psychology* the reader is referred.

4. The fourth theory of materialism is the prevalent one today. It is called *scientific monism or parallelism,* the absolute unity of two parallel series of physical processes in the brain and of psychical changes in consciousness. Each series is independent of the other, the relation between the two being purely one of concomitance. Thought in this theory becomes simply a parallel current, a mere passive attendant on the atomic motions of the brain cells. This is the working hypothesis of many leading philosophers and psychologists, such

[27] *Lectures and Essays,* p. 284.

as Wundt, Taine, Höffding, Fechner, Titchener, Witmer, Hodgson, Royce, and Paulsen. The real starting point of this theory (not always recognized) is the Cartesian dogma of the absolute independence of body and soul, neither affecting the other, and the absolute unlikeness of mental and physical experiences, so that one set could not be the product or cause of the other.

But this assumed dogma is purely theoretic. Modern medicine affords evidence in the localization of brain function, in nervous disorders, and in hypnotic " suggestion," that mind and body do act on each other. There is ample evidence that thoughts and feelings do affect the body. A mother saw a window sash fall and crush three fingers on her child's hand; within twenty-four hours the corresponding three fingers on her hand became sore and festered. Mantegazza relates that during a certain period of his life he had only to concentrate his thoughts upon this or that part of his skin to make it purple little by little. The stigmata of St. Francis seem to have been genuine, as well as many of the other ninety cases which are on record, induced by intense agonizing over the wounds of Christ.[28]

The parallelism theory demands an absolute fatalism, determining every thought and feeling in every man in perfect correspondence with nerve motions and outer phenomena. Each man must be adjusted beforehand to all the events which shall happen in his whole life. Lange illustrated this by his hypothesis of two worlds and two world histories absolutely identical, although in the one men are conscious and in the other are mere automata. Although the two series are considered coordinate, neither acting on the other, yet the attention is concentrated in the physical alone and consciousness is treated as subordinate, a mere by-product, or accompaniment of nervous shocks and brain action. All thought and action are purely reflex, and consciousness becomes the enigma of the

[28] See *Public Opinion,* Vol. XIX, No. 14. Discussion of an article by Dr. Karl von Prel, who gives some of the above and many other striking instances of stigmatization.

universe, a mere useless *epi-phenomenon* of the nervous organism, like the escaping steam which shows that work is being done, but not by itself. As Sigwart puts it, "Everything which goes on in the external world stands in a closed causal connection, and proceeds from physical causes; we stand in no other relation to our bodies than to the motion of the fixed stars."[29] And as Professor James comments, "If pleasures and pains have no efficacy, one does not see (without some such *a priori* rational harmony as would be scouted by the 'scientific' champions of the automaton-theory) why the most noxious acts, such as burning, might not give thrills of delight, and the most necessary ones, such as breathing, cause agony."[30]

A homely illustration may serve as a *reductio ad absurdum* of the parallelist theory. Just after the publication of the first edition of the *Metaphysics* a noted professor of physics wrote to Dr. B. P. Bowne protesting against the emphasis on the reality of mind. The physicist declared that there could be nothing in the universe except matter and its forces, that thought was a powerless accompaniment of the physical processes. To this Dr. Bowne replied that, according to the theory of the letter-writer, in this particular instance the letter itself could only be looked upon as so many marks upon a piece of paper, that certain physical forces had brought about certain nervous states resulting in the scratches on the paper, and that thought had nowhere appeared as an effective factor. Dr. Bowne went on to declare that while he could not accept such a theory as an explanation of the entire universe, he was altogether willing to accept it as an explanation of the particular letter which he had received from the physicist. The physicist made no direct reply, but revealed to a friend that while the Bowne sarcasm irritated and stung, the Bowne criticism was exceedingly hard for a materialist to meet.

But if consciousness is useless, how can we explain its age-long development *pari passu* with the complexity of brain

[29] *Logic*, Vol. II, p. 391.
[30] *Principles of Psychology*, Vol. I, p. 144.

structure under the evolution process, whose one test of the development of any function is its usefulness to the organism? Romanes asks, "Can we suppose that the highest function in the highest creature on the globe is functionless?" and James comments, "It is to my mind quite inconceivable that consciousness should have *nothing to do* with a business which it so faithfully attends." [31]

In spite of the great names associated with it, the theory is inherently weak and logically incredible, at best a mere verbal simplification. It joins together in an inseparable unity the most diverse experiences we know and yet affirms their absolute independence. But if they have nothing to do with each other, who or what joined them together? Spinoza answered, "God." Materialistic psychology gives no answer at all, for God is not recognized in this philosophy of "substance." But the causation impulse demands some answer. Dr. James Ward insists that invariable coexistence and causal independence are impossible. This absolute conformity of the two series without any mutual interaction is contrary to all experience.

It is impossible to preserve this even balance; we feel that one series must dominate the other. The majority of those who hold this theory give the upper hand to the physical series which alone is open to experimentation. Man thus becomes a conscious automaton, a mere action and reaction machine, receiving and transmitting cosmic forces. The prevalence of this disguised materialism in much college teaching and in many text books on psychology and even on ethics is a matter of grave concern. It may not make students open materialists, but it does make them agnostics as to the higher ethical and spiritual aspects of human life and thought.

An effort to solve the problem of consciousness in a manner which recognizes personality, and is satisfactory to theism, has been made by Dr. W. Hanna Thomson. His views are summarized in a note in the Appendix.[32]

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[31] *Principles of Psychology*, p. 136.
[32] See Note Y.

Pessimism and Atheism

Naturalism has no place for personality, morality, immortality or God, therefore its natural and consistent outcome is Pessimism and Atheism. It holds that it is necessary that every form of dualism be rejected. Only by having unity can we have a reasonable philosophy. There can be no alternative between Theism and Atheism. This we willingly grant, though we do not agree with Naturalism in choosing the latter. The logical extreme of all this is found in the views of a Russian writer: "Man like all living nature is an entirely material being. The mind is mere property of the body. Science has brought in a new gospel; its practical conclusion is simple — the old world must be destroyed, and we must begin with the two lies which have ground the world into slavery — the first is God, and the second, duty. When you have freed your mind from the fear of a God, and from childish respect for the fiction of 'right,' then the remaining chains which bind you and which are called civilization, property, marriage, morality, and justice, will snap like threads." In France many scientists and public men are avowed atheists. So too are most anarchists. In Germany philosophic materialism with an inconsistent tendency to idealism is represented by Strauss, F. A. Lange, and Eugen Düring. Its atheistical, anti-ethical, and anti-human extremes are exposed in all their nakedness in the pagan individualism of Friedrich Nietzsche.

CHAPTER XIII

THE NEW THEORY OF MATTER

The problem of what matter is in its ultimate analysis is a vital one for the theistic thinker, for if matter is distinct from the energy which moves it, if it is something inert and passive, then we have an irreconcilable dualism. The universal Spirit cannot be infinite, since it is confronted by a passive load or burden which it must move. The theist desires unity just as much as other metaphysicians, but he can never be satisfied with the unity obtained by the denial of spirit. Now, however, the discoveries of chemists and physicists during the last twenty years in X-rays, ionization, radio-activity, etc., have shown that all our thinking about matter must be in terms of energy, and that the mechanical, chemical and other qualities of matter are but the manifestations of energy. As the atom is a center of energy, we no longer have the old problem of the irreducible dualism of inert matter and animating energy. The new theories of matter should be reviewed here, even though the subject is still in its infancy, and astonishing discoveries are constantly being made.

Let us begin our search for the ultimate constitution of matter by a consideration of the ability of gases to conduct electricity. This power is very slight in the normal state, but can be increased in various ways, such as heating by an electric arc or glowing metals, by passing electric or X-ray discharges through the gas, or by letting ultra-violet light fall on metals over which the gas is passing. The conductivity of gases is due to the generation of ions or gaseous particles carrying either positive or negative electricity according to the conditions under which the ionization took place. Under ordinary atmospherical pressure and low temperature positive ions are produced, but under low pressure and at high temperature negative ions.

These last, because of their importance, have been given a special

name, corpuscles. They are all alike in nature and size, and constitute actual parts of the forms of matter from which they fly. Their velocity is between 10,000 and 90,000 miles a second, or about half the velocity of light. They are almost inconceivably small, being about one thousandth of a hydrogen atom, which has heretofore been considered the smallest particle of matter. They can be deflected from their path by a magnetic force. They serve as nuclei about which atoms and molecules collect. When this happens with water vapor in the air clouds result. The charge of negative electricity which they carry is about the same electrical charge as a hydrogen atom can have. They discharge electrified bodies by rendering the air about them conductive, and they give rise to X-rays in the bodies which they strike. They cause substances to phosphoresce. Their contact gives rise to heat in, and communicates mechanical motion to, the bodies they strike. Finally they are absorbed by all bodies in direct proportion to the density of those bodies, thus penetrating the lighter metals with ease. The cathode rays in an excited Crookes tube are a beam of corpuscles.

Not so much can be said of the positively charged ions, for as yet positive electricity is an enigma. This little is determined, however, that their velocities are much less than those of corpuscles, and their mass about a thousand times greater, about equal to that of an atom of ordinary matter. They can be deflected to only a slight extent even by an immensely strong magnetic field.

It was suggested above that X-rays are emitted by the bodies which have been caused to phosphoresce by cathode rays or corpuscles in a Crookes' tube. It was a matter of speculation as to whether the power of emitting penetrating rays might not be a property of phosphorescent bodies in general. Niewenglowski proved this by photographs taken by rays from certain compounds exposed to the sunlight which penetrated a sheet of aluminum before reaching the photographic plate. Becquerel took a more important step, and found that rays were emitted by uranium which had not been exposed to the ultra violet rays of sunlight, but had been completely sheltered from any previous exposure to the light. The tremendous significance of this discovery lies in the fact that here was a substance which produced the penetrating rays spontaneously, as a natural property, and not because of special conditions. Schmidt shortly afterwards discovered that thorium possessed similar properties. Then M. and Mme. Curie, after a most difficult and laborious investigation, discovered two new substances, radium and polonium and, in conjunction with Debierne, actinium. These three substances possessed the properties we have been describing to a far greater degree than uranium or thorium. It has been found by Rutherford, Thomson, and others that there are many other "radio-active" substances not heretofore known. But radium compounds have this

power of radio-activity so much more vigorously developed than the others that it is receiving the primary attention in the research.

Radio-activity is due to the emission of three types of rays, known as alpha, beta, and gamma. The alpha rays have been shown by Rutherford to be positively electrified atoms of helium, moving with speeds which reach up to about one-tenth of the velocity of light. They are thus about twice the size of a hydrogen atom. The beta rays are negatively electrified ions or corpuscles, similar to those we discussed above save in velocity, for these move with very nearly the velocity of light. The gamma rays are unelectrified and, though very real, are not material, but merely a kind of pulsation in the ether, traveling with the speed of light. These are analogous to, if not identical with, X-rays. Their most amazing trait is the way in which they penetrate the densest matter. The alpha rays are stopped at once by a sheet of paper, the beta rays cannot go through a thin sheet of copper or tinfoil, but the gamma rays will penetrate through a foot of iron and several inches of lead. It is the gamma rays which kill cancerous tissue, yet pass through healthy flesh without affecting it. The beta rays, however, seem to stimulate organic growth. The proportion of the rays is one gamma to nine beta and ninety alpha.

Radium itself has been isolated by Mme. Curie in collaboration with Professor Debierne, but its ordinary use is in one of its salts. It has the appearance of a white metal, but it oxidizes rapidly on exposure to the air and becomes black. It adheres firmly to iron, burns paper, and quickly decomposes water. In its richest deposits it occurs only to the one-millionth of one per cent. It has the heaviest atomic weight (225) of all the elements, except those of its own series, thorium and uranium. The reduction of a ton of pitchblende, yields about one-fourth of a teaspoonful of a radium salt. Its effects are most remarkable. It gives a steady glow, which in the spinthariscope looks like a miniature milky way in motion, as the flying alpha particles are seen striking the zinc sulphide screen. It has an electric action which indicates its presence by ionization. It heats itself, maintaining a temperature 1.5 degrees above its surroundings, even if embedded in frozen air. It gives out enough heat to raise an amount of water equal to itself from the freezing to the boiling point every hour. It breaks up water into hydrogen and oxygen and causes certain other chemical changes. It lights up precious stones and causes objects to phosphoresce. It never comes into exact equilibrium like other substances, but is constantly giving out energy, without receiving the same amount from any other source. Until radium came into the field it was not thought that there could be such a continuous expenditure of energy, but in radium we have, as it were, a dynamo which throws off currents of high-power electricity without any engine or heavy machinery to turn it. Steamships could

be made to cross the ocean by using the energy of a stick of radium and great cities could be lighted forever, as far as human lives are concerned, with a pound of it. The mystery of a continuous dynamic expenditure of force strikes us as a novelty, even though we have become accustomed to the fact that a magnet exercises its attractive force indefinitely, and the sun holds the earth by an enduring static force operating across millions of miles of space.

Radium breaks down into a gas known as radium emanation. It belongs to the family of rare gases in the air discovered by Lord Rayleigh and Sir William Ramsay, *i.e.*, helium, neon, argon, krypton, and xenon. These elements are curious in the fact that, except at white heat, they appear to be incapable of existing in chemical combination with any substance whatever. The connection of radium emanation with this family is shown in that it is impossible to destroy or alter it, yet, unlike the other gases, it is decomposing of itself. During its short life it evolves nearly three million times as much heat proportionately as arises from any chemical action known to man. If a thimbleful of it could be obtained it would probably melt the glass tube holding it. This tremendous store of energy is given out through its decay. That into which it decays is helium, the gas formed in profusion in the atmosphere of the sun. The emanation gives off only alpha particles, and these, it was stated above, are helium atoms. This was proved by a simple experiment. A mass of radium was heated in a sealed tube, connected by a stopcock with an exhausted tube, and on opening the stopcock the delicate gas flowed into the other tube. This was sealed off and examined. After a time it was found that its spectrum was that of helium. If anything were needed to reenforce the conclusions drawn from this experiment, it could be found in the fact that helium when found in the earth at all, is always associated with radium, or some similarly radio-active mineral. It bubbles up, for instance, through springs whose waters are radio-active.

This discovery that radium emanation breaks down into helium was epoch making. It was a demonstration that one element could be transmuted into another, and that the dream of the old alchemists was coming true. The possession by the radium emanation of such enormous energy — fully 400,000 times that of dynamite — led Sir William Ramsay to try its effect on other kinds of matter. He placed it in water, and not only did it decompose the water into hydrogen and oxygen, as radium itself does, but instead of decaying into helium, as when in contact with air, it changed into neon! Still more surprising, if into the water containing the radium emanation some copper sulphate is introduced the result is not neon, but argon.

Two other remarkable things resulted from these experiments. In the decomposition of the water into hydrogen and oxygen there was

found resulting too much hydrogen, some ten to twenty per cent. too much. Again when the experiment with the copper sulphate was finished there was found to be present both sodium and lithium. The sodium might possibly have come from the glass of the vessel, but the lithium could not have come from any source save the copper. It was apparently a product of the decay of the copper. Here then was a well-known metal, one of the oldest and most familiar in human use, turned at the magic touch of a mysterious emanation into another metal entirely different in appearance, color, weight and utility. Lithium is the light, white, soft metal whose volatile compounds produce the magnificent crimson flame so well known in pyrotechny. And turning again to the laboratory of earth for verification, it is interesting to note that some of the uranium copper ores of Colorado contain minute traces of lithium. This leads to the suggestion that the radium emanation merely accelerated in the copper a natural decomposition, a process always and everywhere in operation, the continuous disintegration of all matter; for copper is by no means a peculiar element, and what happens to it may be taking place with lead, carbon, sulphur, and every other element known to man.

Let us return for a moment to the radio-active substances. Crookes discovered that uranium could be separated into two portions, one of which was radio-active and the other not. Becquerel, investigating further, found that after several months the part that was not radio-active to begin with regained radio-activity, while the part which had been radio-active had now lost that power. These and other peculiar effects of radio-activity received a satisfactory explanation in a theory proposed by Rutherford and Soddy, according to which the radio-active elements are not permanent, but are gradually breaking up into elements of lower atomic weight. Uranium, for example, is slowly breaking up, one of the products being radium, while radium breaks up into its radio-active emanation, this emanation into another radio-active substance, and so on. The radiations are given off by the atoms as they pass from one to another, *i.e.*, the rays constituting the radio-activity are produced when a radium atom breaks up and an atom of emanation appears. Thus the atoms of radio-active elements are not immortal, but live for periods varying from a few seconds as in the case of the gaseous emanation from actinium to thousands of millions of years, as in the case of uranium. What we call chemical elements are merely residues left after ages of disintegration similar to that which radium and like bodies are now undergoing.

It is a matter of importance whether a constituent common to all radio-active elements can be found. Recent investigations lead us to suppose that there is such a constituent, for it appears that the little particles shot out by radio-active elements differ solely in velocity.

"If now we could prove that these same particles, which are the evidence of elemental decay, occur as well in ordinary substance, our suspicion of a universal decay would be just so much enforced. The interest thus deepens and becomes highly significant when the fact is associated with the results of a research recently published by Professor J. J. Thomson. He has shown that in the intense electrical field generated in a Crookes tube substances give off particles charged with positive electricity, that these particles are independent of the nature of the gas from which they originate, and that they are of two kinds: one apparently identical with the hydrogen atom, and the other with these very alpha particles that are projected normally from radio-substances." This confirms Ramsay's finding that pure water in contact with radium emanation yielded an excess of hydrogen. Professor Thomson "means us to infer that all the elements with which he experimented broke down, or were decomposed, in part, into the well-known element hydrogen. . . . But Thomson's research has a wider scope. He shows us that the ordinary forms of matter can emit, in addition, the very same particles (alpha rays) that were thought to be a constituent peculiar to radio-active substances. So far, then, as the possession of alpha particles is concerned there is nothing peculiar in radio-active substances; they are contained potentially in matter of every kind. But if they are the product and evidence of elemental decay, then, since they occur in ordinary matter, we should be justified surely in suspecting that this decay is universal. If, now, we could prove that matter of every kind not only contains them, but emits them, we should, in accordance with our present ideas, no longer suspect, but *know,* the universal degradation of matter. This today can be done only presumptively, but the presumption is strong."[1]

As they lose their velocity these alpha rays become invisible. When they have traveled a certain distance, varying with the density of the matter through which they are traveling, it becomes impossible to detect them by a photographic plate, or a phosphorescent screen, or the electroscope. It is very significant that at the moment when they vanish beyond our power to pursue them they still possess sixty-four per cent. of their initial velocity and forty-one per cent. of their initial kinetic energy. Further we have been unable to detect the emission of alpha rays by some of the stages in the decay of radio-active elements, when by all analogy the emanation at that stage should be emitting them. This is probably due to their traveling at a velocity too low to enable us to detect them. "The critical velocity below which they cannot be detected is some fifteen billion centimeters a second — a very considerable pace. Now for conclusions: Were these particles not possessed of an initial velocity a trifle greater than this value we should not have

[1] R. K. Duncan, *Some Chemical Problems of Today,* pp. 54–6.

been able to find them; and today we should not only be ignorant of their existence, but ignorant as well of radio-activity. Furthermore, were ordinary substances, matter of every kind, emitting these particles at any velocity below this very considerable pace, they would be wholly beyond the power of present-day apparatus to detect. Now for inferences: We know that ordinary matter potentially contains these particles; we know that they are detected flying off from radio-active substances solely through this slight excess of velocity; and we know that, with the exception of their ray emissions, radio-active substances are chemical elements in no wise peculiarly different from ordinary matter. There is, therefore, a strong presumption that ordinary matter is continuously emitting these particles, that, in consequence, it is undergoing degradation, and that we are in ignorance of it only through the limitations of our apparatus. Finally, it leads us also to think that the only essential difference between radio-substances and ordinary substances lies in the velocity of the particles they eject." [2]

It has been recently found that all matter when struck by radiations of any sort, alpha, beta, gamma rays, X-rays or even light rays, emits rays of its own, called delta rays. They appear to be slow-moving corpuscles (beta rays) proceeding out at practically the same speed quite independent of the character and energy of the impinging particles that cause them. They are not, however, created by the bombardment of the other rays, for Professor J. J. Thomson has shown that they are emitted by common substances, such as the alkali metals, even in the dark and, in certain cases, in a vacuum. The effect of the bombardment by other rays seems to be the hastening of this form of decomposition of matter. It can perhaps be illustrated by an analogy. Paper may be slowly smoldering into decomposition, but if a lighted match be brought near it, the paper is destroyed by a sudden whiff of flame. Thus the delta rays may be the "flame" of the smoldering of the ordinary atom, which bursts into greater activity when the internal store of the atom's energy is liberated by the impinging of other rays. The lithium obtained from copper by the action of radium emanation may be merely the "ashes" of the copper, to carry our figure further.

"So," concludes Professor R. K. Duncan, the eminent student of industrial chemistry, whom we have been following in this part of our discussion, "it appears that Ramsay's announced achievement in degrading copper into lithium need not be received with incredulity, need hardly excite surprise, for it is supported by many diverse facts of modern knowledge.

[2] *Ibid.*, pp. 57, 8.

It appears that the elements of matter, that we have taken for granted were so immutable and enduring, are transmutable into simpler forms. That the elements are not only transmutable but transmuting is not so plain, but there is much to be said for it. Those rare gases, helium and its congeners, that we have found to be the by-products of this elemental decay, are found in the air to the extent of nearly one per cent.; they have been found, likewise, in all the places in the earth where gas collects. They are found in the gases collected from mineral springs and from volcanoes; the very rocks of the world on being heated expel them; they may be extracted from the pores of the soil, and recently they have been discovered as a general constituent of natural gas. It is reasonable to suppose that they appear in all these diverse places as a by-product of the earth's decay. We are additionally ready to accept this when we find that the gases so collected, together with the earth itself, are radio-active, for radio-activity is the very sign and seal of disintegration. Finally, when we find that, through the radio-activity of the materials of the earth, there is continuously being evolved an amount of heat far, far in excess of that required to maintain the earth's loss of heat by radiation, and to keep its temperature constant, we perceive not only the disintegrating dissolution of matter, but we begin to suspect as well a fatally determined acceleration of it to some one time, 'in the which,' to use the words of the apostle Peter, 'the heavens shall pass away with a great noise, and (στοιχεῖα δὲ καυσούμενα λυθήσεται) the elements intensely heated shall be broken up, and the earth and the works that are therein shall be burned up.'" [3]

So far we have found that the heavier elements are decomposing into the lightest, so that hydrogen and helium seem to be the final products. Is there any evidence that the heavy elements are ever evolved out of lighter? Modern astronomy gives the answer conclusively. The hottest stars consist almost exclusively of the very light gases, predominantly hydrogen,

[3] *Ibid.*, pp. 60–62.

and more faintly helium, and a gas called "asterium," which is so far unknown on earth. In stars of somewhat lower temperature there begin to appear some of the heavier elements, like calcium and iron, and in the coldest stars we find nearly all the elements which exist on the earth. These metallic elements appear first in the hotter stars in disassociated condition, and afterwards in the cooler stars in their normal forms. Further as the temperature decreases the elements put in their appearance, approximately at least, in the order of their atomic weights. Thus the evidence of celestial evolution is as strong as the evidence of modern chemistry that the heavier elements have evolved in nature's laboratory from the lighter, in other words that the elements are indeed transmutable.

But we have not yet discussed the ultimate particles of matter out of which hydrogen and all other atoms are built. Can it be that the negative ion or corpuscle, whose properties we examined at the beginning of this chapter, is the ultimate unit? and that out of combinations of these corpuscles, all the elements are formed? Let us recall what we have learned of them. We found that they existed in flames and glowing metals, within an arc-lamp, in the neighborhood of dynamos, in the presence of X-rays, on bubbling gas through water, and are given off when the ultra-violet rays of the sun fall on metals. Radio-active bodies in their natural normal condition give them off spontaneously. The soil and water of the earth emit them and the air we breathe contains them. From whatever source they arise these corpuscles are similar in all respects with the exception of mere velocity. We know, too, that they are one thousand, or some say seven hundred, times smaller than the hydrogen atom.

Proceeding on the theory that the atoms of the chemical elements are actually built up of corpuscles, we at once have an explanation of the fact that resistance, which substances interpose to the passage of corpuscles, depends solely upon the density of the substance. The corpuscles in the substance must be extremely minute compared to the atom as a whole, and the vacant spaces between them must be enormous. Sir Oliver Lodge puts it thus: if we imagine an ordinary sized

church to be an atom of hydrogen, the corpuscles constituting it will be represented by about seven hundred grains of sand, each the size of an ordinary period in print, rotating, with inconceivable rapidity. Crookes puts it still more graphically: The sun's diameter is about one and a half million kilometers, and that of the smallest planetoid about twenty-four kilometers. If an atom of hydrogen be magnified to the size of the sun, a corpuscle will be about two-thirds the diameter of a planetoid. An oxygen atom would contain 16×700 or 11,200 corpuscles, and a mercury atom 200×700 or 140,000. Thus the denser the matter the less chance a wandering corpuscle would have of penetrating it, even though it might go far in the vacant spaces without colliding with another corpuscle. A whole beam of corpuscles would finally be absorbed by a dense material. However the atom, being a closed system, would be impervious to all other atoms, and would act exactly as the older atomic theory, which considered it an ultimate indivisible mass of matter, declared that it did act.

This is explainable on the corpuscular theory of matter. A negative charge of electricity has always associated with it an equal positive charge, and so in all probability the corpuscles are similarly accompanied by positive electricity. We, therefore, assume the atom to be a sphere of positive electrification enclosing a thousand or more corpuscles, the negative electricity of the corpuscles exactly balancing the positive electricity of the enclosing sphere.

This theory of the atom has been established both mathematically and experimentally. Professor Thomson calculates mathematically that the corpuscles would arrange themselves on concentric spheres, the outer shell of positive electrification surrounding and balancing them all. Professor Mayer proved experimentally all these mathematical calculations about the relative number of corpuscles on each concentric sphere. He floated numbers of tiny negatively charged needles thrust through discs of cork on the surface of water, and over them he suspended a pole of positive electricity. The needles, which represented the corpuscles, mutually repelled each other, while the attractive force of the positive electricity caused them to assume positions on concentric circles in numbers and configurations which agreed with the calculations of Professor Thomson. Of course the magnets move only on the plane of the water, while the corpuscles move in any direction in the space of the atoms. Further they are at rest, but if they were in a state of steady motion describing in their successive rings circular orbits about the center of the sphere it would not destroy the character of their

configurations. The tremendous velocity of corpuscles is such that they must revolve in their orbits either in concentric rings or concentric shells. The mathematical difficulties in the latter case are greater than the former, but not insuperable.

On the basis of revolution in concentric circles enough has been worked out for different numbers of corpuscles to show that this electric theory of the atom explains all the properties possessed by the atoms of the chemical elements. The periodic law, that the properties of an element are a periodic function of its atomic weight, which has been the great mystery of chemistry, now receives its explanation, but to show this would involve a complicated discussion of Professor Thomson's mathematical calculations. Enough to say that the periodic recurrence of properties turns out to be, in fact, a necessity if the atoms are built up of corpuscles. We can also explain valency or the power possessed by an atom to unite with others, for the valency of an atom is now seen to be a measure of the number of corpuscles which it will lose in the presence of other atoms, *i.e.*, a univalent positive atom is one which attains stability under the conditions of chemical action by losing one corpuscle, or a divalent negative atom attains its stability only by acquiring two corpuscles. Chemical action is thus electric and corpuscular in its nature. Positive atoms of sodium attract the negative atoms of chlorine, because the sodium atom has one corpuscle which can escape into and find a home in the chlorine atom, which needs one more corpuscle to maintain its stability under the condition of electric attraction set up by the proximity of the atoms. Thus sodium chloride or common salt is the result.

Radio-activity is explained by this theory of matter. Professor Thomson has demonstrated that some atoms are unstable, and if the velocity of their corpuscles falls below a certain value they will rearrange themselves suddenly in a new configuration. If the number of corpuscles is very great, as in radium, the kinetic energy involved would be sufficient to shoot some off in a system of their own as a separate atom with a high velocity. "This all agrees with the facts of radio-activity. The radio-activity of radium, for example, is thus an atomic cataclysm. When the point of instability is reached the explosion occurs with the projection of two kinds of particles, which are sub-atoms inside the group but free atoms outside. One of these is the alpha particle consisting of two or three thousand corpuscles and the other is the atom of the emanation which contains probably about 150,000. The atom of the emanation is of the same type as the atom of radium. Its configuration for steady motion depends on its kinetic energy. Consequently the process is repeated for the emanation, but in a very much shorter time, and we again have the evolution of alpha particles, which seems as a matter of

fact to be the atom of helium, together with the formation of another atomic system, called emanation X. This, too, breaks down but this time with a perfect conflagration of decomposition in which the alpha particles, the stray corpuscles, or beta-rays, and the gamma-rays all appear together. We may, therefore, define a radio-active substance as one whose atom consists of a complex group of corpuscles the configuration of which depends for its maintenance upon a certain velocity of movement of the corpuscles comprising it and beneath which velocity the corpuscles rearrange themselves with the evolution of an amount of energy which breaks down the atom." [4]

The enormous heat emitted continuously by radium receives an explanation on the principle of interatomic energy. The phenomenon is as remarkable as if a stove should keep red hot without any fuel to maintain it. This heat emission has been found to be due to the alpha-rays which are absorbed in the radium itself. The radium is, as it were, bombarded by its own particles and those of its disintegration products, so that it is no wonder that it is intensely heated. Thus the energy of radium is interatomic. Yet only a very minute number of atoms of a mass of radium are disintegrating at any one time, not more than thirteen trillionths of it a second. Calculating from this it is estimated that the average life of a radium atom is at least 2,450 years. Since only the elements of heaviest atomic weight have this property of radio-activity, in which alone they differ from other elements, it is proper for us to conclude that similar enormous stores of energy are locked up and lie latent in all other forms of matter. Professor Thomson states that a grain of hydrogen has within it energy sufficient to lift a million tons through a height considerably exceeding one hundred yards, and that since the amount of energy is proportional to the number of corpuscles comprising the atom of the element, the energy of other elements such as sulphur, iron or lead must enormously exceed this amount. If our knowledge of the infinitely small and the infinitely powerful continues to increase with the same strides that it has made in the last few years we may some day be able to control this stored-up energy.

There is yet one final step to take in this discussion, which is the most significant of all if we endeavor to reach an explanation of matter. Instead of assuming that corpuscles are particles of matter possessing the properties of negative electricity, let us assume, instead, that corpuscles are particles of negative electricity possessing the properties of matter. We have been trying for more than two generations to explain

[4] R. K. Duncan, *The New Knowledge*, pp. 170, 1.

electricity as a mechanical process, and apparently we have failed. Now we are succeeding better by explaining mechanics as an electrical process. We are coming to believe that matter is made up of electricity and nothing but electricity. That which matter and electricity have in common is the property of inertia. It requires an effort to put matter in motion when it is already at rest, and to stop it when once in motion; in fact it would never stop unless opposed by some resistance. Electricity has this same characteristic. In each case the phenomenon is due to simple inertia, and it can be shown that inertia is purely electrical in its nature.

Faraday, the prophet of science, first suggested that every moving particle carries with it an electric charge, "if it be anything else than an electric charge." In 1881 Professor Thomson showed that an electric charge concentrated on a moving sphere, must possess inertia due to the electro-magnetic field of force which it creates by its motion in the surrounding ether. This means that it will tend to resist change of matter, *i.e.,* has inertia, and will thus behave as though its mass were increased. But in order that this inertia, or increase of mass, should be perceptible, it is necessary that the sphere should be very small and that its speed should approach that of light. Sir Oliver Lodge has shown by mathematical calculations that as the speed of light is approached the apparent mass would increase enormously. When corpuscles were discovered the interest in Professor Thomson's hitherto academical discussion was stimulated, for here were infinitely small particles moving with velocities approaching that of light. Kaufmann performed experiments with corpuscles proving that *the mass increases with the velocity.* Professor Thomson then proceeded to show that *the whole of the mass is due to the electrical charge upon it.* Since the corpuscle is the constituent of the atom, and the atom of the molecule, and the molecule of a mass of matter, then it follows that the inertia of any material body, and the mass of it as measured by the inertia, is due simply to the electrical charges in motion.

Why this should be so Professor Duncan tells us. "By

mass is meant quantity of matter, and the idea that the quantity of matter in a body depends on the speed with which an electric charge moves, is difficult to grasp concretely; for we are accustomed to think that the quantity of any given object is invariable. We may, however, obtain a concrete representation of the idea by considering the analogical case of a sphere moving through a frictionless liquid. In such a case, when the sphere moves, it sets the liquid around it moving with a velocity proportioned to its own, so that the sphere is accompanied by a definite volume of the liquid. This volume is one-half the volume of the sphere and the sphere, therefore, behaves as though its mass were increased by that amount. In the case of a cylinder moving at right angles to its length, the mass of the cylinder is increased by the mass of an equal volume of the liquid. Now the cylinder in our case is the electric charge and the frictionless liquid is the ether. The electric charge possesses no mass at all, and the total mass, therefore, is due to the bound ether carried along by the charge in its motion, the total amount of the bound ether depending on the velocity of the charge. On this view of 'the electrotonic theory of matter,' all mass is the mass of the ether, all momentum, whether electrical or mechanical, the momentum of the ether, and all kinetic energy the kinetic energy of the ether." [5]

We have seen how the electrotonic theory accounts for inertia, chemical action, the atoms of matter and their peculiar properties as exemplified in the periodic law, and the phenomena of radio-activity. It also accounts for static and current electricity, for magnetism, for radiations of light, X-rays, etc., but we cannot here enter into such extensive applications of the theory. But there are some phenomena not yet explained by it. For instance, what is positive electricity, as distinguished from negative, which consists of corpuscles? We must answer that we do not know. "If it is made up of particles, these particles must either have no mass at all, or very little, for the mass of the whole atom seems to be simply the

[5] *Ibid.*, pp. 184, 5.

sum of the masses of its negative corpuscles. Positive electricity as apart from an atom does not seem to exist. It never seems to fly free as the corpuscle does. Its nature is today a mystery." [6] Again we have not explained gravitation, which any universal theory of matter cannot overlook. Nor have we learned what the ether is, though it remains as necessary a concept as ever for logical, scientific thinking.

Yet despite these unexplained facts, the theist stands on sure enough ground to fear no longer the dualism of mind and matter, for on a dynamic basis they are reconciled. The electrotonic theory of matter gives us an analogy for the study of Creation. All matter in the last analysis is force, and the points at which force acts to a center become manifest as matter. Some have called these centers of energy "vortices" or "whirlpools," but such names add nothing to what we have learned from modern science about the atom. God is the source of all energy. On the divine force of the universe He impresses the "dance of harmony." Before His word goes forth, we call the energy nothing, for to us it would be nothing if unordered. God conducts the process, but God is not the process. God's immanent presence sustains the force in orderly, harmonious ways of working. As a great musician plans an entire sonata in his mind and then gives life and body to it by playing it, even so, but without any instrument, is the marvelous universe embodying through Will the thought of the Divine Mind.

[6] *Ibid*, p. 188.

PART II

THE SPIRITUAL IDEA OF MAN

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The personality of man is the correlative of the personality of God; the two together form the indispensable basis of religion. *Nullus in microcosmo spiritus, nullus in macrocosmo deus.*

In our study of the spiritual idea of man the following is the definition to be established and used:

A person is a self-conscious, self-determining being, conscious, in relation to other persons, of a law of duty obligatory but not compulsory on his will.

Personality is incapable of demonstration, but it underlies all human thought and speech. Like the idea of God it is confirmed by many lines of study, historical, philosophical, moral, and ontological. Accordingly the following will be the subjects of the succeeding chapters: the *historical evidence* for the universal belief in the soul; the *philosophic analysis* of the grounds of this belief, along the lines of the consciousness of the essential difference between mind and body, of the ineradicable conviction of personal identity, and of the will as the expression of personality; and the *witness of the conscience* to moral freedom. Then, as in Part I, we will conclude our study by an examination of the *denials of the spiritual idea of man:* the scientific, philosophic, and theological denials of freedom of the will; the denials of conscience in Utilitarian and Evolutional Ethics; and the denials of ontology in Nescience and Agnosticism.

CHAPTER XIV

THE UNIVERSAL BELIEF IN THE IMMORTAL SOUL

The universal belief in the soul is the most obvious expression of faith in spirit. It is treated as a mark of humanity by all anthropologists, and both of the main theories of the origin of religion, nature worship and fetishism, are based on man's instinctive conviction of personality.

The modern study of comparative religion is as purely inductive as any science. It uncovers the foundation truths which form the basis of all religions, and gives us material for a study of the soul as a simple fact in the universal consciousness of man. Anthropologists in recent years have gathered together a mass of material about the faiths of primitive peoples, which shows the beliefs and convictions of man concerning himself, as expressed in traditions and customs, laws and worship. From these we can infer the intuitions which lie deep in human nature itself. However, many of the books on anthropology have a strong anti-spiritual bias, and we must draw our own conclusions from their data. They must be read critically, and a distinction must be drawn between their facts and their theoretic conclusions. Illingworth warns us that "we must remember that the science of religions has only partial access to the phenomena with which it deals; and, further, that it is still in the empirical stage, most of its generalizations being as yet more or less hypothetical, and needing careful scrutiny before they can become premises, from which further conclusions may be drawn." [1]

Writers of all schools agree, as we saw earlier, that the idea of God is universal, and so also do they agree in acknowl-

[1] *Personality, Human and Divine*, pp. 164, 5.

edging that man everywhere believes himself somehow a spirit, or at least an immaterial being, able to control his own body while alive, and survive it at death. All religions, as distinguished from philosophies, teach the immortality of the soul, though varying in their conceptions of the nature of the life to come and the degree of personal identity.

Evidence for this faith in spiritual being goes back to prehistoric times. The study of the cave dwellers of the stone ages shows that this was true even in the dim beginnings of human life. The fact that prehistoric men reverently buried their dead together shows that they recognized the ties of family and kinship and, as they laid their tools or weapons beside them, they must have believed, like the American Indians, in another life in which they would be needed and could be used. Quinet exclaims: "In this primeval being, in whom I knew not whether I was to find an equal or the slave of all other creatures, the instinct of immortality reveals itself in the midst of the tokens of death! How different does he seem to me after this discovery! What a future I begin to discern in this strange animal, who scarcely knows how to build himself a better shelter than that of the beast, and yet who tries to provide eternal hospitality for his dead! I seem to touch the first stone on which rests the edifice of things human and divine. After this beginning the rest is easy to believe." [2]

All the great races of antiquity believed in immortality. Among the nations of Chaldea the earliest cuneiform tablets speak of immortality and judgment, though indefinitely. Professor Craig in editing Assyrian and Babylonian texts comments: "There was a belief in a future existence, how universal or limited we cannot say; but that it existed and entered as a controlling factor into the life of the King and, as it would seem, of necessity, therefore, into the life of the people, the monumental psalms and prayers declare. . . . There was a vagueness and indistinctness about these visions of the future as there always has been and, in the nature of the case, always

[2] *La Création.*

must be. On this subject of eschatology, however, the Babylonians, like the Egyptians, far surpassed the Hebrews, while in their doctrine of Sin and Pardon their spiritual vision was equally clear." [3]

The *Book of the Dead* of the Egyptians taught a personal survival of the dead, a resurrection of the body, in anticipation of which the corpse was embalmed, and a judgment, or weighing of the heart in the hall of Osiris. This Book represents the psychology, the ethics, and the conception of immortality in the forms which they assumed in the Nile Valley from six thousand to ten thousand years ago. The Zoroastrian dualism taught that the life of man has two parts, that on earth and that beyond the grave. After his earthly life each one is punished or rewarded according to his deeds, and spiritual blessing is reserved to the faithful worshipers of Ormazd. Thus a belief in immortality pervades the Persian religion, and is held by most authorities to have strongly influenced the later Jewish ideas of immortality.

The earliest religion of Greece and Rome seems to have been ancestor worship, as is shown by their "lares and penates" in each household. But ancestor worship is itself the expression of faith in the soul's life after death. The teaching of their mythology concerning the place of the dead will be treated later. The Scandinavian myths tell of a material kind of life after death. Even the favorite horse of the deceased was slain that he might be served by it in the spirit world. The North American Indians believed that in the world to come their spirits would continue their old pursuits, so they buried bows and arrows with the dead. The Peruvians and the Aztecs made mummies of the dead and had definite teaching concerning the punishment of the wicked.

Cæsar tells us that the belief in the immortality of the soul was the ground work of the British faith, taking from them the fear of death, and inspiring them with courage. The Welsh *Triads* reveal ideas concerning the nature of the soul

[3] *Assyrian and Babylonian Religious Texts,* Preface.

not unlike the religions of India. "The soul is a particle of the Deity possessing in embryo all its capability. Its action is defined and regulated by the nature of the physical organization it animates. The soul which prefers evil to good retrogrades to a cycle of animal existence, the baseness of which is on a par with the turpitude of its human life. The process of brutalization commences at the moment when evil is voluntarily preferred to good. To whatever cycle the soul falls, the means of reattaining humanity is always open to it. Every soul, however frequent its relapses, will ultimately attain the proper end of its existence — reunion with God. A finite being cannot support eternity as a sameness or monotony of existence. The eternity of the soul, until it merges in the Deity, is a succession of states of new sensations, the soul in each unfolding new capabilities of enjoyment." [4]

This general faith in existence after death took different forms according to the philosophic conceptions of the race. Races believing in a personal god or gods believed in personal immortality, whereas pantheistic religions had only vague ideas of personality, and looked forward to absorption into the great world spirit, through rebirth by transmigration. However, in early India the *Rig Veda* contains many references to individual immortality. The soul is supposed to ascend in the smoke of the funeral pyre in a sublimated body free from imperfection. This immortality is strongly personal, for the dead join and know their families. There is no rebirth in the early books, as was taught by the Brahmins later. Spirit is the animating, thinking principle which can leave the body in sleep and separate from it at death. Its location is in the heart. At death the good enjoy a life of bliss and joy with their fathers under a tree of beautiful foliage, and all rejoice with the chief of the dead. The early *Vedas* are indefinite as to retribution. There is some slight mention of a dark underground world, as in the Scandinavian myths. As a later development came the Brahmin teaching of transmigration of souls,

[4] E. O. Gordon, *Prehistoric London, Its Mounds and Circles*, pp. 40, 41.

and the Buddhist theory of Karma, an endless series of existences, stretching on into the dim future and terminating in absorption into the world-soul, a condition known as Nirvana. This, if not actual extinction, is at least complete quiescence, the absolute zero of being. It is hardly necessary to point out that even these long flights of metaphysical reasoning are based upon the primitive belief in man's survival after death. But the mass of the people probably never held the fine spun theories of the later philosophic books and continued to believe in personal immortality, as, indeed, the Buddhists now allow in China, Japan, Siam, and Ceylon. Thus the religious faith of the heart, which the masses everywhere held, has proved too strong for philosophic speculations.

At the present time all savage races hold belief in the soul. It comes out clearly in their funeral customs, their language about the dead and their complete psychology. Everywhere we find the conviction of a spiritual nature belonging to man, somehow distinct from the body's life. Thus when the Tongans were explaining to a European their belief in the continued existence of those who had died, one of them took hold of the stranger, and said, "This will die, but the *life* that is within you will never die." The Macusi Indians of Guiana say, "that although the body will decay, 'the man in our eyes' will not die, but wander about." In many cases the spirits are supposed to haunt the familiar scenes of former days and need to be driven away. For instance, the Bodo of Northeast India on the funeral day of a friend, take with them to the grave the usual portion of food and drink for the deceased and, addressing him while they present the repast, they say: "Take and eat; heretofore you have eaten and drunk with us, you can do so no more; you were one of us, you can be so no longer; we come no more to you, come you not to us."

The Navajo believes that there are three entities in man, his body, his soul which survives and continues its existence in the land of spirits, and his spiritual body, an indefinite sort of third element. The West African negroes have this type of psychology very highly developed. The Tshi-speaking

negroes of the Gold Coast believe in this triple division of man; (1) his corporeal body, which perishes; (2) his soul, or ghost, which only comes into being when the corporeal man ceases to exist, and proceeds to Dead-land where it continues the former vocations of the man as the vehicle of individual personal existence; and (3) the indwelling spirit of the living man, which is called his *kra*. This spirit existed independently before the man's birth, and after his death will continue to exist independently of the soul or ghost. The Ewi-speaking peoples of the slave coast hold exactly similar views, having merely another name for the third element. The Ga-speaking peoples of the eastern districts of the Gold Coast have modified the original conception and believe that each individual has two kra, a male and a female of opposite dispositions.[5]

Instances of particular beliefs could be multiplied, but probably enough has been said to show that the existence of a belief in the soul on the part of man is universal both with respect to the divisions of race and the length of time the human family has been on earth. This spiritual idea of man shows itself especially in the concept of *personal* survival after death.

It remains for us to examine the charge that the Jewish race formed a strange exception to this belief in personal immortality.

We admit that there is no emphasis laid on immortality and no definite teaching as to retribution in the life to come. But this does not prove that the people as a whole did not believe in a survival of the soul in a shadowy sort of way as did the early Greeks. Absolute unbelief is incredible. How could they have had that genius for religion which all grant them if they had not this fundamental faith? "It can hardly be maintained that such stories as that of the conversation at Endor between the living Saul and the dead Samuel could emanate from a people destitute of belief in a life after death."[6] Anthropologists, who are unbiased, hold that the early Israelites did believe in spirit. If they were materialists, they form a solitary exception to the rest of mankind, which is all the stranger because the ancient Chaldeans, their progenitors, the Egyptians, among whom they had sojourned, and the Canaanites, who surrounded them, all believed in the soul. Beneath the customs and religious observances of the Hebrews we are conscious

[5] Cf. Maj. A. B. Ellis, in *The Popular Science Monthly* for April, 1890.
[6] Fiske, *Life Everlasting*, p. 39.

of the presence of Semitic traditions flowing as an undercurrent. Israel's religion did not end like the natural tribal religions, but it began where they began. We find the shadow of the old religions often falling across the narrative. The sacred pillar which stood by Jehovah's altar and also by Rachel's grave was connected with the primitive worship of the dead. Many a time did the prophets endeavor to uproot this superstitious belief. When the Children of Israel rebelled in the Wilderness "they joined themselves unto Baal-peor, and ate the sacrifices of the dead." The Jewish mourners shaved their heads as in the days of the old hair offerings, and covered their faces before the dead, lest they should see its spirit, just as Saul bowed his face to the ground before the spirit of Samuel. There are allusions which seem to show that the Hebrews observed the rite, seen among the Arabs today, of pouring oil and wine upon the graves of the dead. Some authorities find evidences of solemn funeral feasts like those of other nations, and in any case they were exceedingly careful of their funeral rites and burials.

It is quite probable that the Mosaic law purposely ignored the life to come, because the idea of immortality had such intimate connection in the popular mind with heathen rites and superstitions. The Egyptian religion with which they had just been associated dwelt exclusively on death and the after life. The Egyptian "Scripture" was the *Book of the Dead.* So much idolatry and worship of the gods was mingled with Egyptian funeral rites that it need be no wonder that Moses and the Law forbade such worship and are silent concerning the whole hereafter. The Canaanites also had funeral feasts and ceremonies at the graves of the dead, and many expressions in the Psalms imply that the people of Israel took part in them, thus worshiping heathen gods and demons. Funeral customs are slow to change, and many Israelites may have continued their use even after the law of Moses was proclaimed. This argument is supported by the incontestable fact that the prophets and the later legislation condemned the current ritual of the dead. It was a primative form of worship opposed to that of Jehovah, the one and only legitimate object of Israel's worship. When we once understand this we can appreciate the significance of the Jewish law and its declaration that even the least contact with a dead body made a man unclean.

A somewhat similar reason for the silence of the Pentateuch may be the fear lest references to the world to come might encourage necromancy and sorcery. The laws against these practices were severe and explicit. "The soul that turneth unto them that have familiar spirits, and unto the wizards. . . . I will even set my face against that soul, and will cut him off from among his people."[7] "There shall not be found

[7] Lev. 20:6.

with thee . . . any one that useth divination, or that practiceth augury, or an enchanter, or a sorcerer, or a charmer, or a consulter with a familiar spirit, or a wizard, or a necromancer. For whosoever doeth these things is an abomination unto Jehovah: and because of these abominations Jehovah thy God doth drive them (the Canaanites) out from before thee."[8] Saul when he visits the witch of Endor has to solemnly swear that she will be protected from capital punishment for violation of the laws against necromancy which he himself had up to that time rigorously enforced. The witch seems to think that he is merely laying a trap for her that he may "cut her off out of the land," as he has done the rest who were "wizards and had familiar spirits."[9] That these people existed in Isaiah's time is shown by his indignant questions, "And when they say unto you, seek unto them that have familiar spirits and unto the wizards, that chirp and mutter: should not a people seek unto their God? On behalf of the living should they seek unto the dead?"[10]

Another reason for the silence of the Jewish scriptures was the dreariness and unpleasantness of the ideas of Sheol, the underworld of the dead, in which Israel like many other ancient nations believed. Their ideas were quite similar to the early Greek conception of Hades. Both Greeks and Jews recoiled from such a half-existence, not counting it worthy of the name of life in comparison with that lived under the warm sun. And in Greece as in Israel we do not find at first any trace of the idea of retribution for the deeds done in this life, for the state of the dead was dream-like, lacking all reality. The ψυχή survived death, as an individual entity, but still only as a shadow of its old self, its whole thought a vain regret for the strong, active life in the bright sun-lit world of reality. This purely subjective, inactive state without will or hope was described as due to the shades lacking φρένες, the organs of passions and affections and will. This is obvious in the account of the appearance of the shade of Patroclus to Achilles, asking him to burn his body, for the shades in Hades would not admit him until the funeral flames should make him theirs forever. Achilles wakes and tries to seize his friend's form.

"In vain: he might not grasp the shade; away like smoke it flew,
And gibbered 'neath the ground. Upstert the chief in wonderment,
And clapped his hands, and from his mouth the bitter wailing went.
Ah, woe is me! the shade that roams in Pluto's gloomy hall
Hath shape and size, but in its form nor pith nor power at all."[11]

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[8] Deut. 18:10–12.
[9] I Sam. 28:8–10, 21.
[10] Isa. 8:19.
[11] *Iliad* XXIII:100 ff. Blackie's translation. He renders φρένες "pith and power."

We have the same thought of utter weakness in the *Odyssey*. When the suitors fall before the arrows of Ulysses, Hermes gathers them together and leads them unwilling to the abode of the phantoms of the way-worn men. "He started them forth and led them, while they followed on with squeaking, gibbering cry. Just as when the bats fly chirping about the depths of some monstrous cave, and one has fallen from the cluster on the rock, and they cling fast one to the other up aloft, even so the souls went on and chirped as they went. And Hermes, the helper, led them down the dank ways." [12]

Homer makes no difference between the noble and the vile, the brave and the cowardly in the after state. All are on a "dead-level" of emptiness and misery. The passages in the *Odyssey* describing the punishment of Tantalus and Sisyphus are late. The Greek mythology in the earliest period placed the earth and the underworld under different gods, Zeus and Pluto. In this the Hebrews differed from them for they represent Jehovah as omnipresent. "If I make my bed in Sheol, behold, Thou art there." [13] "Sheol is naked before God." [14] Amos represents God as saying "Though they dig into Sheol, thence shall my hand take them." [15]

That the Jews from the first believed in a place of departed spirits is clear. The phrase "gathered to their fathers" must mean some place common to all, for Terah died in Horan, Abraham on Mt. Nebo, Moses on Mt. Pisgah, and generations of Israelites in Egypt and Chaldea, away from their ancestors' tombs. Jacob refuses comfort when he supposes Joseph to be dead, "I will go down to Sheol to my son mourning," and David says of his child, "I shall go to him, but he will not return to me."

The Jewish belief of the future life is thus described by Kirkpatrick, "Death is never regarded in the Old Testament as annihilation or the end of personal existence. But it is for the most part contemplated as the end of all that deserves to be called life. Existence continues, but all the joy and vigor of vitality are gone forever. Communion with God is at an end: the dead can no longer 'see' Him: they cannot serve or praise Him in the silence of Sheol: His loving-kindness, faithfulness, and righteousness can no longer be experienced there. . . . To the oppressed and persecuted indeed Sheol is a welcome rest, and death may even be a gracious removal from coming evil; but as a rule death is dreaded as the passage into the monotonous and hopeless gloom of the under world. The continuance of existence after death has no moral or religious element in it. It is practically non-existence. The

[12] Bk. XXIV, beginning.
[13] Psalm 139:8.
[14] Job 26:6.
[15] Amos 9:2.

dead man 'is not.' It offers neither encouragement nor warning. It brings no solution of the enigmas of the present life. There is no hope of happiness or fear of punishment in the world beyond."[16] Gesenius defines the רְפָאִים (Rephaim) as "*Manes,* shades living in Hades, according to the opinions of the ancient Hebrews, void of blood and animal life (נֶפֶשׁ), therefore, weak and languid like a sick person, but not devoid of powers of mind, such as memory." Job describes Sheol as "the land of darkness and of the shadow of death, the land dark as midnight."[17] The writer of Ecclesiastes says that "there is no work, nor device, nor knowledge, nor wisdom, in Sheol."[18] Isaiah in a masterly song of triumph over Babylon represents the arrival of the king of that nation in the underworld. "Sheol from beneath is moved for thee to meet thee at thy coming; it stirreth up the dead for thee, even all the chief ones of the earth; it hath raised up from their thrones all the kings of the nations. All they shall answer and say unto thee, Art thou also become weak as we? art thou become like unto us? Thy pomp is brought down to Sheol."[19] It is no wonder that with such ideas of Sheol as a sad, dark, and pitiable existence, that the Jewish mind should shrink with dread from the thought of it, and be reticent in speaking of it. There was nothing to arouse religious emotion in the dismal world of fleeting shadows.

The chief reason why we do not find the idea of moral judgment in the future life developed among the Israelites in the time of Moses is that they had not yet reached the stage of ethical development when such a belief arises. The Law met them on their own level and confined the penalties of sin to this world. We have seen that this was true of the early Greeks. It seems to have been the case also with the American Indians. The whole attention of the Hebrews was centered on the present world, the more so as the corporate sense among them was very strong, and the sense of personality weak. Jehovah, as the God of Israel, cared for the individual only as a member of the community and as concerned with the coming of the Messianic kingdom. In this longed for event the individual could only have a representative share through a descendant. This idea of a corporate immortality for the race compensated in a measure for the hopelessness of the conception of personal survival. Jehovah's covenant was not with individuals, but with Abraham's family and his seed after him. The promises were made to all Israel, and the nation is frequently addressed as a whole. The promise in the fifth commandment, "that thy days

[16] *The Psalms,* pp. xciii, xciv.
[17] Job 10:21, 2.
[18] Ecc. 9:10.
[19] Isa. 14:9–11.

may be long in the land which the Lord thy God giveth thee," is for the race. Many of the Psalms are spoken in the name of the people, and in their behalf Jeremiah utters his Lamentations. This sense of unity is clearly indicated in the use of the singular for names of tribes and nations, *e.g.,* Israel, Judah, Moab, Midian, etc. This can be contrasted with the western method of using the plural for settled nations living in towns, *e.g.,* Romani, Germani, etc. The individual was identified with his family and bound up with its fortunes. The family was condemned to suffer for the sin of its head. The family of Achan perished with him, as did also the families of Korah, Dathan, and Abiram with their heads. Daniel's accusers with their families suffered the fate they had planned for him. In China the punishment of the whole family with the offender lasted until recently. The Afghans made satisfaction for the death of an English officer by executing the family of the murderer to the second generation. The family was merged into the larger life of the tribe and nation. Circumcision was a corporate rite, for it introduced the individual into the nation, and the father who failed to circumcise his child was punished. The personality of the individual was, therefore, merged in the community, and when he looked to the future it was not so much concerning himself that he thought, as concerning the prosperity of all Israel.

The break up of the Jewish state weakened the corporate feeling and tended to develop the new sense of personality in direct relation to God as caring for the individual. Only during or after the Exile do we find a clear expression of a faith in a future life worth the living, which is also the sphere of judgment. Then, as Cheyne says, the example of Zoroastrianism stimulated the Jewish prophets and psalmists to expand their own germs of truth. Through ethical growth and the teaching by the prophets of higher conceptions of divine righteousness, and through the suffering and bitterness of the Exile, earnest men came to feel that this world and its short life could not be the whole field of man's activity. The future life was no longer indifferent to moral distinctions, but became the very home of judgment and stern justice.

It is in the spiritual struggles of Job that we see this change of viewpoint taking place, not as the result of logical reasoning, but by heart leaps born of his sense of intimate and indestructible connection of his soul with God. At first he has the usual conception of Sheol as a place which will give him a rest from the disappointments and pains of this world.

> "There should I have lain down and been quiet;
> I should have slept; then had I been at rest
> With kings and counselors of the earth,
> Who build solitary piles for themselves;
> Or with princes that had gold,
> Who filled their houses with silver . . .

There the wicked cease from troubling;
And there the weary are at rest.
There the prisoners are at ease together;
They hear not the voice of the taskmaster.
The small and the great are there;
And the servant is free from his master." [20]

Job was feeling in an acute personal way the problem that disturbed the childlike faith of early ages, namely the insolent triumph of the wicked and their freedom from punishment. Job exclaims, "Wherefore do the wicked live, become old, yea, wax mighty in power? Their seed is established with them in their sight, and their offspring before their eyes." [21] How could he help longing that God Himself, who must be eternally righteous, would solve the awful enigma. "Oh, that I knew where I might find Him." [22] And the later Isaiah, despite his undying faith could not repress the sigh, "Verily, Thou art a God that hideth Thyself, O God of Israel." [23] But Job and an ever increasing number of earnest souls, found light for the darkness of earth in their faith in the life to come. They held fast their conviction of eternal right, despite appearances, and made their appeal from this transitory world to eternal life for the vindication of God's justice and the triumph of the good. This desire of the soul for the manifestation of righteousness was not vindictive, but vindicative, and it greatly intensified the faith in immortality. "If a man die, shall he live again?" questions Job.[24] In some after life there will be a renewal of the intimacy of the soul with God, which has been sundered by the grave and the sojourn in Sheol. The vindication of the right which human hearts demanded with an insistance which could not be silenced, received its most triumphant expression in the cry of faith and trust of the doubt-tossed Job:

"I know that my Redeemer liveth,
And that He will stand up at the last upon the earth:
And after my skin, even this body, is destroyed,
Then without my flesh shall I see God;
Whom I, even I, shall see for myself,
And my eyes shall behold, and not as a stranger." [25]

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[20] Job 3:13–19.
[21] Job 21:7, 8.
[22] Job 23:3.
[23] Isa. 45:15.
[24] Job 14:14.
[25] Job 19:25–27.

CHAPTER XV

PHILOSOPHIC ANALYSIS OF THE SOURCES OF THE BELIEF IN THE SOUL

I. CONSCIOUSNESS OF THE ESSENTIAL DIFFERENCE BETWEEN MIND AND BODY: EGO AND WORLD

In the development of our own personality and mental powers our first clear impression was the consciousness of the essential difference between the self and the world, for the earliest rational perception of an infant is the vaguely felt distinction between itself and the things outside its body. It knows the world first, but this experience arouses the feeling of its own distinct existence. Professor James writes: "The first sensation which an infant gets is for him the Universe. And the Universe he later comes to know is nothing but an amplification and an implication of that first simple germ which, by accretion on the one hand and intussusception on the other, has grown so big and complex and articulate that its first estate is unrememberable. In his dumb awakening to the consciousness of *something there,* a mere *this* as yet (or something for which even the term *this* would perhaps be too discriminative, and the intellectual acknowledgement of which would be better expressed by the bare interjection 'lo!'), the infant encounters an object, in which (though it be given in a pure sensation) all the 'categories of the understanding' are contained. It has objectivity, unity, substantiality, causality, in the full sense in which any later object or system of objects has these things." [1]

[1] *Principles of Psychology,* Vol. II, p. 8.

Professor Minot thus describes the process. In his first five months the infant lays the foundations of knowledge. In the seven months following he is engaged in original research, constant, untiring, amazing, trying to find out something about himself and his environment. He is getting the fundamental concepts. When six months old the baby already has the idea of cause and effect, and begins to appreciate the value of human intercourse. He has discovered the material universe in which he lives, the succession of time, the nature of space, his own existence, his *ego* and its relationship with other individuals of his own species. "By eight months the baby is upon the full career of experiment and observation. Everything with which the baby comes in contact interests him. He looks at it, he seizes hold of it, tries to pull it to pieces, studies its texture, its tensile strength and every other quality it possesses. Not satisfied with that, he will turn and apply his tongue to it, putting it in his mouth for the purpose of finding out if it has any taste. In doing this hour after hour, with unceasing zeal, and never interrupted diligence, he rapidly gets acquainted with the world in which he is placed. . . . How wonderful it all is! Is any one of us capable of beginning at the moment we wake to carry on a new line of thought, a new series of studies, and to keep it up full swing, with unabated pace, all day long till we drop asleep? Every baby does that every day." [2]

The next rational step of the child after distinguishing between himself and the world, is the perception of the difference between himself as a thinking, willing power and his own body, which obeys that will. If our will were never resisted when we sought to move our body, if matter were plastic to every motion we made, if we found by experience that all nature took the course we desired, if no feeling of "other-ness," of a separate world, should arise over against our personal consciousness, we would in that case, either suppose that we ourselves are the creators of the world we live in, as pure Idealism does hold,

[2] *The Problem of Age, Growth, and Death*, pp. 242, 3.

or we would feel no distinctions at all between the self and the not-self, that is we would fail to become self-conscious.

Two great thinkers have recorded for us what they consider their first overwhelming convictions of personality. Thus Professor A. Gratry of the Sorbonne writes: "I remember, in childhood, before I had attained what is called the age of reason, once experiencing this sense of Being in all its vividness. A great effort against something external, distinct from myself, whose unyielding resistance amazed me, led me to pronounce the words: 'I am!' I thought of it for the first time. Surprise grew into intense amazement and into the most vivid admiration. I repeated with transport: 'I am! . . . being! being!' All the religious, poetic, and intelligent foundation of my soul was stirred and awakened at that instant."[3] The self-consciousness of Jean Paul Richter was aroused by an effort to shut a door against a strong wind. Later he analyzed his experience into three logical steps, (1) sense of effort against something unseen, (2) feeling of reality, resistance in the outer world, and (3) the feeling of his own will sharply distinct from his body which he controlled, and from outside things which he could not control.

However this feeling of the *ego* arises, every one knows what it is and what it involves. It is the simplest of all thoughts, arising with the force of an intuition, yet mysterious and baffling. It marks an epoch in the child's existence when it ceases to call itself John or Mary, and says "I," and gradually begins to realize the meaning of this shortest word. No philosophical speculation can shake this intuitive feeling of the dualism of all experience and of all knowledge, the difference between the thinking "I" and the outer world, between the inner life of consciousness and the outer life of sensation. The idea of spirit arises spontaneously in each individual, and is reenforced and made clearer when he attains to personal re-

[3] *Guide to the Knowledge of God*, p. 347.

sponsibility. It is formulated and developed by tradition and philosophy, but these did not create it; it is their ground. It is the very condition of rational thought. It is a universal property of man as man. It borrows nothing from logic and analysis. It creates, but is not created by, language. It was especially intensified by Christianity, with its assertion of the worth of the soul in God's sight and its appeal to the individual man; but in and by itself personality antedates all reasoning and all religion.

Lotze and Wundt speak of the "incompatibility of mind and matter," *i.e.,* we cannot express either in terms of the other. Human language is the deposit of reason, and we find in all languages the distinction between matter and thought. We are conscious of mental states as belonging to ourselves, parts of our own experience. But things outside of us are common to all. They are accidental and transitory. The mind thinks, feels, reasons, and wills; it has no form and occupies no space. Matter is ever extended; it occupies space, it always has body and weight and is impenetrable.

I place all existence over against myself as the object of consciousness, which I as subject know. But since this *not-me* includes my fellow men, this *me* is soon enlarged by a knowledge of them, and I rise into social being. Thus our human environment is most vital to our development. Through it we persons become the *us,* and the Cosmos with all its contents becomes the *not-us.* In this division we rank the *us* far above things. Some philosophers object that we make too strong a contrast between the *not-us* and the *us.* But their objection is due to their coolly ignoring the profound significance of the human environment. By taking note only of the *ego* and the Cosmos without this middle term, their next step is the losing of the self in the Cosmos. They talk glibly of the universal monism, all inclusive. When we reflect on the multitude of personalities, each of whom insists on his own individuality, we must recognize their supreme influence on us, developing our characters, and making us men and not brutes. There are several cases of infants left in the forests, who survived

to grow up hardly human.[4] The human influences are the most important that can play on us.

The Hegelian weakness in this fundamental particular has been excellently dealt with by Professor Rashdall of Oxford. He specifies the fallacy as "the assumption that what constitutes existence for others is the same as what constitutes existence for self." "I detect that fallacy," he writes, "in almost every line of almost every Hegelian thinker . . . whom I have read, and many who object to that designation. . . . All the fallacies of our anti-individualist thinkers come from talking as though the essence of a person lay in what can be known about him, and not in his own knowledge, his own experience of himself. . . . Of course, I do not mean to deny that a man is made what he is (in part) by his relations to other persons, but no knowledge of these relations by any other than himself is a knowledge which can constitute what he is to himself. However much I know of another man, and however much by the likeness of my own experience, by the acuteness of the interpretation which I put upon his acts and words, by the sympathy which I feel for him, I may know of another's inner life, that life is forever a thing quite distinct from me, the knower of it." [5]

II. THE INERADICABLE CONVICTION OF PERSONAL IDENTITY

Another ground for the belief in spirit is the ineradicable conviction which every one has of personal identity, *i.e.*, the consciousness of the self as personal being, distinct from all its experiences, inner and outer, and essentially the same in the present as in the past.[6]

This is the one true identity of being which is the source of all our ideas of identity and unity. Myself implies the continued existence of that indivisible thing which is "I." What-

[4] See *The Lancet*, Aug. 1, 1914.
[5] Sturt (Edit.) *Personal Idealism*, pp. 382, 3.
[6] For other kinds of identity see Note U.

ever this self may be, it is something which thinks, deliberates, resolves, acts, and suffers. I am not thought, I am not action, nor am I feeling. My thoughts and actions change every moment. They have no continual, but only a successive, being, but the self, which thinks and acts, abides ever the same, and to that self these experiences all belong. "I" am the permanent, invisible substratum underlying them all and preserving them buried deep in the mystic realm of memory. Every man is certain of this *ego,* but it is difficult to defend, when it is challenged by psychological and metaphysical arguments. It has been denied from the first by Empiricists, and was considered as an impossible idea by Herbert Spencer.[7]

But the influence of Spencer is weak in comparison with the teaching of the physiological psychologists in college lecture rooms and laboratories, who boast that "against opposition, against bigotry and ridicule, against personal abuse and persecution," they have fought their way to their present position, "until today it is the dominant conception of the psychology of personality. . . . Psychologists today appear to be pretty well agreed as to this result in its general aspects. Consciousness, the realm of personality, appears to be a very complex combination of elements, which in the last analysis are like the simplest colors and sounds, and are called sensations. These are of a great variety and number, and determine by their character and arrangement various kinds of conscious states or processes. Thus one grouping gives us thought, another feeling, and another will. Or to put it in a different way, if we take those states of mind in which we are said to think or feel or will, and subject them to analysis, we shall find them to consist of nothing but peculiar arrangements of elementary sensations; and the only difference we shall discover between them will consist of a difference in the character and arrangement of the sensations involved. Elements in combination, that is all. . . . Soul and personality . . . indicate for the psychologist nothing but the kind of correlation in which all

[7] See Note V.

mental activities are found. Sensations are always *somebody's*. The same is true of combinations of sensations. It is *I* that think and feel and will. Yet this *I* does not involve any new elements; it is not something new in kind. It is rather only the way in which all mental elements are found, as a matter of fact, to coexist. Remove these elements, destroy the correlation or change it, and the soul and personality are removed, destroyed, or changed. Thus the soul is not a power, a creative force, an independent existence, separate and distinct from its sensation elements. It is simply these elements in more or less stable combination. . . . Remove the conscious elements, and the personality is also removed." [8]

The world of science and learning has its alternating seasons and its capricious fashions. Just at present we are experiencing a wave of empirical psychology. As has been said: "It began with an increasing self-observation, and it has developed to an experimental science, with the most elaborate methods of technique, and with scores of big laboratories in its service. . . . The whole world of outer experience had been atomized and explained, and there remained only the world of inner experience, the world of the conscious personality, to be brought under the views of natural science. . . . It began with an analysis of the simple ideas and feelings, and it has developed to an insight into the mechanism of the highest acts and emotions, thoughts and creations. It started by studying the mental life of the individual, and it has rushed forward to the psychical organization of society, to the social psychology, to the psychology of art and science, religion and language, history and law."

Ribot thus sums up the characteristics of the new psychology: it "differs from the old in its spirit, it is not metaphysical; in its end, it studies only phenomena; in its procedure, it borrows as much as possible from the biological sciences . . . it has for its object nervous phenomena accompanied by consciousness. . . . Psychology becomes, in the proper sense of

[8] Professor T. E. Woodbridge of Columbia University at Church Congress, 1902.

the word, experimental. . . . We study not the phenomena of consciousness, but its variations. Or, more exactly, we study psychical variations indirectly by the aid of physical variations that can be studied directly. . . . But it is so far from being a complete psychology, that it offers us at present only attempts. The future alone will be able to fix its true value, and to say whether the scientific rigor to which it aspires can be altogether attained." [9]

These words of caution should have been more heeded, but, as we have seen, the physiological psychologist has often turned metaphysician, while many writers on psychology do not hesitate to use the slowly accumulating facts of the experimentalists in the wildest way. The rank and file of the school are impatient with the moderation of the great workers. Even Wundt is counted conservative because he admits some possibility of initiative in the subject of his experiments, and du Bois-Reymond was not spared when he dared to think that there were some problems in the universe which could never be solved on purely mechanical principles.

They hold there is no personal unity, but only a synthetic unity, a grouping or continuity of inner experiences which permit no causal efficiency to the self. It is like a constitutional monarch who reigns but does not govern, whose signature is necessary that a law or treaty may be complete as an act of the state as a whole, but who signs every document laid before him impartially and without discussion. Person is simply a convenient term for a complex of sensations, the concrete given unity of all conscious activities, but a unity which is merely continuity and itself does nothing.

Long ago Goethe remarked that many French philosophers thought they could explain an organism by analyzing it into its parts. The acute critic put his finger on the flaw in their reasoning, the fallacy that the axiom, the whole is equal to the sum of its parts, applies to living and even thinking beings. They seem blind to the fact obvious to all whose minds are not

[9] *German Psychology of To-day,* pp. 5–15.

biased, that there is an element in life, and much more in mind, as disturbing to their narrow formulas as an infinite quantity in an ordinary mathematical equation. Professor E. Hering has shown how liable to err in this way is the physiological study of mind. "So long as the physiologist is only a physicist he stands in a one-sided position to the organic world. . . . As the crystal to the mineralogist, the vibrating string to the student of acoustics, so also the animal, and even man, is to the physicist only a piece of matter. That the animal experiences pleasure and pain — that with the material life of the human frame are connected the joys and sorrows of a soul and the vivid intellectual life of a consciousness; this cannot change the animal and human body for the physical student into anything other than it is — a material complex subject to the unalterable laws which govern also the stone and the substance of the plant, a material complex whose external and internal movements are causally as rigidly connected amongst each other, and with the movements of the environment, as the working of a machine is with the revolution of its wheels. . . . Thus the physiologist as physicist stands behind the scene, and while he painfully examines the mechanism and the busy doings of the actors behind the drop scenes, he misses the sense of the whole which the spectator easily recognizes from the front."[10] Bergson has much to the same effect in *Creative Evolution.*

The new psychology with the soul left out, petulantly complains that it can never find the soul by itself — without its clothes, so to speak. "It never does anything," so it seems to them, but only because it really does everything as the ever-present, willing, and active subject of all experiences, feelings, and thoughts. The eye, likewise, sees all but itself which does the seeing. Empirical psychology disdains metaphysics, and offers to make all things plain. It sweeps away as "superstitions" the universal faiths and experiences which make men truly men, the I, the Will, the Conscience. But its "plain

[10] *Uber das Gedächtniss als eine allgemeine Funktion des organischen Materie,* pp. 4, 5.

truths" are simply meaningless to the normal mind. "There is no need of any underlying entity, the thoughts themselves are the thinker," but how can there be thoughts without a thinker? "The mind is only a series of states of consciousness," but how can there be such states if there is no mind to be conscious of them?

James Ward tells us that there are only three alternatives in any theory of personality. (1) It is a series of states of consciousness, which is aware of itself as a series. Of this theory he says, "paradox is too mild a word for it; even contradiction will hardly suffice." (2) It is a series of states in which the parts are aware of each other in succession, A of B, B of C, and C of D, each in turn serving as object and subject. But this is only a multiplying of the conscious entity, which is denied as a unit, into a multitude of entities. (3) All the terms of the series exist for a spiritual, self-conscious subject. "Hopeless," he tells us, "is the attempt by means of phrases such as the unity of consciousness to dispense with the recognition of a conscious subject." [11]

William James contended for "the logical respectability of the spiritualistic position." "I confess," he writes, "that to posit a soul influenced in some mysterious way by the brain-states and responding to them by conscious affections of its own, seems to me the line of least logical resistance, so far as we yet have attained. . . . The bare *phenomenon,* however, the *immediately known* thing which on the mental side is in apposition with the entire brain-process is the state of consciousness and not the soul itself. Many of the stanchest believers in the soul admit that we know it only as an inference from experiencing its states." [12]

The fact of memory testifies to the reality of personality. J. S. Mill, though an Empiricist, admits the force of this strange certainty and experience in which long past acts and thoughts reappear as present facts in consciousness though recognized as

[11] *Enc. Brit.,* 9th Edit., Vol. XX, p. 44.
[12] *Principles of Psychology,* Vol. I., pp. 181, 2.

past.[13] So also Höffding tells us that "In recognition and in memory is expressed an inner unity to which the material world affords no parallel." [14]

The memories are in themselves present feelings, but they involve a strange belief in their own continued existence. They imply a permanent substratum which abides, though the feelings change and pass. My personal identity consists in my being the same "I" who did or felt some specified fact in the past recalled by memory. This succession of feelings which I call my memory is that by which I distinguish myself from other persons. Memory is explained by the physiological psychologists as impressions left on certain cells in the brain which are associated together. True, but they correspond to the pages in a daily diary, a glance at any entry awakens a whole related group of past experiences most vividly. But the cells like the pages, are entirely passive, they are not conscious of their own contents any more than are the pages. It is the self which makes the impressions, reads and recalls their meaning, and recognizes the truth of the record —"I did or felt that thing." To doubt the memory's witness to the unity of our being, covering all thoughts and feelings, is to doubt the primary fact of consciousness, which is the subject matter of psychology.

Besides this unity of consciousness there is still another property of mind unaccounted for by those who study the phenomena of the inner life by the methods of exact scientific research. Both are so clearly stated by Merz that his words should be quoted at length. "The first of these properties is the peculiar unity exhibited by the higher forms of organic existence, and still more evident in the phenomena of mental or inner life. Instead of unity, it might perhaps be better to call it centralization. Now, the more we apply mathematical methods, the more we become aware of the impossibility of ever arriving at a comprehensive unity by adding units or elements together. The sum of atoms or molecules, however

[13] See Note W.
[14] *Outlines of Psychology*, p. 47.

artfully put together, never exhibits to our reasoning that appearance of concentration which the higher organisms or our conscious self seem to exhibit . . . a special kind of unity which cannot be defined, a unity which, even when apparently lost in the periods of unconsciousness, is able to reestablish itself by the wonderful and indefinable property called 'memory' — a center which can only be very imperfectly localized — a together which is more than a mathematical sum; in fact, we rise to the conception of individuality — that which cannot be divided and put together again out of its parts.

"The second property is still more remarkable. The world . . . of the inner processes which accompany the highest forms of nervous developments in human beings, is capable of unlimited growth; and it is capable of this by a process of becoming external: it becomes external, and, as it were, perpetuates itself in language, literature, science and art, legislation, society, and the like. We have no analogue of this in physical nature, where matter and energy are constant quantities, and where the growth and multiplication of living matter is merely a conversion of existing matter and energy into special altered forms without increase or decrease in quantity. But the quantity of the inner thing is continually on the increase; in fact, this increase is the only thing of interest in the whole world.

"Now, no exact scientific treatment of the phenomena of mind and body, no psycho-physical view of nature, is complete or satisfactory which passes by and leaves undefined these two remarkable properties of the inner life, of the epi-phenomena of nervous action, of consciousness. And it seems to me that Professor Wundt is the only psycho-physicist who, starting from science and trying to penetrate by scientific methods into the inner or psychic world, has treated the subject comprehensively, and fairly and fully tried to grapple with these two facts peculiar to the inner world — its centralized unity and its capacity of unlimited growth through a process of externalization. He has done so by his philosophical theory of 'apperception and will,' and of the 'growth of mental values,'

two conceptions which lead us into the realm of philosophical thought." [15]

On the principles of psychology itself we must accept and ponder *all* the facts of consciousness, whether we understand them or not. We cannot get rid of the fact that human experiences belong to some one person and no other. This subjective intuition of the permanent self is correlative with the objective intuition of the world's unity and "substance." If we question this ever-present witness of the "I" to itself, we must question all the affirmations of consciousness, and still more the validity of the logical reasoning from which the doubts start.

Equally clear is the witness of our consciousness to the fact that this unity rests in an *active ego,* which is more than a "synthetic unity" that passively registers all the diverse experiences which compose it with absolute indifference as to their quality. The "newer" psychology of the Personal Idealists, together with Ward, James, Baldwin, Stout, Sturt, Sigwart, and others, starts from the universal faith in the self as intensely active. There is not only perception but active apperception. Du Bois-Reymond dwells especially on this principle of apperception. He is one of those who show signs of a decided return to a recognition of personality and the mystery of it. Professor James states as axioms the propositions that the personal consciousness is continuous as well as changing, and that it takes interest in some part of the many objects of thought before it, within or without, and constantly makes choice between them; [16] a strange fact to which Goethe's phrase applies, "Man bids the moment pause." By no legerdemain could a "series" fix its "attention" on one of its own members. This voluntary element in perception is fatal to the passive theory. And Sigwart from the standpoint of Logic makes this strong assertion: "In psychology we must start from the closed unity of the individual consciousness, and accept the fixed Ego as the center of all relations. . . . The ob-

[15] *History of European Thought in XIXth Century,* Vol. II, pp. 524, 6.
[16] *Principles of Psychology,* Vol. I, p. 225.

jection that the concept of the soul has rendered no service to psychology applies only to the attempts of rational or metaphysical psychology to derive definite predicates from the concept of substance or of simple essence, instead of obtaining them from the given, experienced content of life; apart from that, the concept of the soul at any rate renders this service to psychology, that from the point of view of method it alone makes psychology possible." [17]

III. THE WILL AS THE EXPRESSION OF PERSONALITY

The strongest witness to personality is the sense of freedom as power to choose between alternative motives or courses of action, and to originate phenomena without and control thought within. As Augustine vigorously contended the will is the man. The will is not a "faculty," but the *ego* itself energizing or acting, conscious of self-determination, by free choice and with intelligent purpose. The *ego* acts with motives or reasons, but is always conscious of the possibility of alternative choices. A necessitated will is no will.

This subject is of vast import. Ethical life and man's spiritual being stand or fall with its acceptance or denial. As Lotze says, "This conviction is the absolutely fundamental point upon which the entire religious character of our view of the world depends. And for him who does not directly experience and acknowledge this, all questions of religious philosophy are altogether superfluous." [18] The general trend of philosophical and scientific and of many ethical writers denies it, or modifies it into determinism. Huxley thought that "the progress of science means the banishment of spontaneity," and Spencer wrote: "Psychical changes either conform to law or they do not. If they do not, this work, in common with all works on the subject, is sheer nonsense: no science of psychology is possible." But "such ejaculations," comments Pro-

[17] *Logic*, Vol. II, p. 393.
[18] *Philosophy of Religion*, p. 100.

fessor James, "are beneath criticism." [19] The Neo-Hegelians, emphasizing spiritual unity, hold freedom to be "irrational," though not all of them tell us as bluntly as Bradley does that, considered theoretically or practically, the belief in free will is a lingering chimera, like the belief in witches, and that no man who respects himself can treat it seriously.

Yet the weighty voices are not all against free will, as its opponents would try to make us believe. All ethical writers until recently treated it as the condition of moral life. It had in its favor in the past such worthy supporters as Aristotle, Cicero, Augustine, Shakespeare, and Kant.[20] More recently it was defended by Lotze and Martineau. The names of a few other advocates may serve to show the respectable following that freedom of the will has: In Germany, Eucken, Kuno Fischer, Rothe, Stern and Zeller; in France, Boutroux, Delbœuf, Fonsegrive, Noëls, Renouvier, Secretan, and notably Bergson. In Great Britain, A. J. Balfour, Boyce Gibson, Hamilton, Illingworth, Lodge, Maher, Seth, Rashdall, Romanes, Sturt, and James Ward. In America William James has been a leading advocate. Illingworth has already been quoted as stating that the immense weight of philosophical authority is beyond question on the side of freedom of the will.[21] The discussion of the denials of freedom will be found in a separate chapter.[22]

Aspects of Will Consciousness

There are three aspects of will consciousness; (1) deliberation with choice between divergent motives or desires; (2) volition with definite purpose; and (3) execution with effort, the origination by immediate causation of phenomena which would not begin but for our voluntary action, and the carrying out, often after long delay, of fore-determined action.

1. *Deliberation with choice* between divergent motives. Choice is so prominent an element in will action that it is often

[19] *Principles of Psychology,* Vol. II, p. 576.
[20] Of course the problem was not before them in its modern form.
[21] See p. 114.
[22] See Chap. XVIII.

used to define the will itself, as by Aristotle, Cicero, and Jonathan Edwards. But more important is deliberation, the weighing of reasons and the conscious decision between them, for it proves we are not mere passive spectators of contending forces or motives in our minds, but that we stand apart from the motives judging them. We are not the resultant of the final action of the strongest of the motives, still less is our will their product. We are the active agents, and they the data for decision. Rothe holds that moral freedom consists in this, that the "I" is lord of all motives and can form or modify them, can react against them, and can do the contrary to any one of them while he concentrates himself within himself.

The less the deliberation, the less the responsibility, as in cases of delirium or insane impulse, when the actions are simply instinctive. We say of the hasty act of an angry man that "he lost control of himself," and we blame him for this lack of self-control. If he actually cannot check himself, as in delirium, we do not hold him responsible. Attempts have been made to identify free-choice with *motiveless* decision. We are told that if the strongest motive does not decide choice, then there is no choice, like the fourteenth century ass that was supposed to starve because he could not make up his mind to which of two exactly equal and equidistant hay stacks he should go. But such reasoning is absurd. Will, like love, must have an object. We must know what we will or desire, and that object or purpose is urged or resisted by many divergent considerations which it at once arouses, pleasure or pain, profit or loss, right or wrong. Freedom does not mean motiveless choice, but a free choice or decision between motives, making one prevail by our will, like Brennus throwing his sword in the scale. As Herman Schwarz tells us, an act of volition is not a mere resultant of contending motives, nor is it determined by an idea or a feeling, or by any complex of ideas or feelings in themselves; it is determined by the whole personality of the willing subject.[23]

[23] *Psychologie des Willens.*

2. *Volition with definite purpose.* Deliberation and decision are followed by an act of volition directed to a foreseen end. Volition is not concerned with choice, for that is past, but with intention, the definite aim and purpose, and the means to attain it. This constant foresight and intention distinguish will-action from instinct and reflex-action. Instinct is organic, coordinated action to a certain end without consciousness of that end. Reflex action is immediate response to a sudden stimulus without conscious will.

3. *Execution with effort.* The carrying out of the fore-determined action is often hindered or delayed. The two preceding aspects of will-consciousness have been purely mental, this on the other hand emphasizes the realizing of intentions. The executive will enters into the world of actualities and effects changes in human life and in nature. The long and purposeful delay between willing a definite act and the carrying it out shows that we have full control of our actions. If motive alone were the determining cause, action would follow at once on impulse. The passage from inner purpose, potentiality, to outer deed, actuality, is profoundly significant, for the will thus acting on matter with effort is the source of our idea of force. The origination in nature of certain phenomena which would not happen but for our free act, shows the will to be, within limits, a true first cause.

But equally significant is its action within consciousness, which includes attention, control of thoughts, inhibition of emotion and action, and inner resistance to force. Each and all of these powers refute the theory of Hume,[24] and prove the *ego's* control of the inner world of consciousness. We cannot determine what we shall see with the body's eye, but we can determine what we will view with the mind's eye. We can preserve a certain train of thought or dismiss it, we can call up images of the past and dwell on them, and we can refuse to consider those that arise uncalled. Control of the mind, the power of concentrated attention, is a mark of mental strength;

[24] See Note W.

the lack of it means weakness. Villa asserts that "modern psychologists, such as Bain, Wundt, James, Höffding, Stout, Baldwin, and Ladd . . . all agree upon one point — namely that to determine and define the true character of conscious life, it is necessary to pay special attention to its inner and subjective aspect, consisting in feeling and volition. Psychology, which was formerly intellectualistic, may now be said to be decidedly 'volitionist.' The laws of consciousness are substantially the laws of feeling and of volition." [25] Inhibition is the repression of emotion and bodily action. It is seen most strikingly in self-control when enduring pain or provocation and insult. "Better is he that ruleth his spirit, than he that taketh a city." [26] The animal obeys the strongest impulse, just as a machine obeys the hand that controls it. But while man has many of the strongest animal impulses and appetites, such as hunger and the instinct of self-preservation, he holds them under control. Finally as the mark of the highest manhood we have the resistance to internal difficulty, as in obeying the call to duty when the lower nature desires ease, and the resistance to external force, so that, though the body be punished, the will remains steadfast against all obstacles.

The Grounds of Belief in Freedom

1. *The Affirmation of Consciousness*

This consciousness of freedom is a mark of humanity. All men live and act under it, and all social life depends on it. The deniers of freedom do not appeal to any elements in consciousness, nor to any facts in human life and society. They hold a theory, philosophic or scientific, and rule out all the evidence which makes against it. They simply affirm the impossibility of freedom on their own premises, but their premises are not proven. Theory may be against free-will, but experience is for it. Professor Sidgwick says that there is a formidable array of cumulative evidence offered for the inward determination of the will, but he admits that over against

[25] *Contemporary Psychology*, p. 373.
[26] Prov. 16:32.

this is "the immediate affirmation of consciousness in the moment of deliberate action. And certainly, in the case of actions in which I have distinct consciousness of choosing between alternatives of conduct, one of which I conceive as right or reasonable, I find it impossible not to think that I can now choose to do what I so conceive, however strong may be my inclination to act unreasonably, and however uniformly I may have yielded to such inclination in the past." [27]

But why all this mystification? Why cannot we accept as philosophical truth that verdict of our consciousness which we assume in the whole course of our lives as true, and which we treat as practical truth in all our dealings with each other, and in every reflection on ourselves? Why is a verdict of consciousness — and that the most certain of all — to be treated as less trustworthy than a verdict of the senses on purely mechanical lines?

However, as the various denials of freedom will receive systematic treatment in another chapter, we can here be content to pass on to other grounds for our belief in freedom.

2. *Affirmation of Conscience*

We are conscious of our freedom because of the conviction of duty, the feeling of obligation, the sense of responsibility for thought and action, the passing of judgment on others and ourselves, and the sense of guilt and remorse after any wrong doing. We are more certain of our moral freedom, including the power of choice and our responsibility for our choice, than of any other fact whatsoever. Two elements stand out clearly in moral experience: the insistent voice of conscience that we should do right at any cost, and the profound feeling of self-condemnation if we fail in a great duty. Social judgment is less striking than self-judgment. A man unjustly condemned by a court may go to death with peace and upright head, but many a criminal has found the burden of conscious guilt too great to bear and has sought release from it by voluntary confession and submission to just penalty.

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[27] *Methods of Ethics*, p. 64.

Bentham and Tyndall made a futile attempt to ignore "motive" and judge only "act." Bentham proposed that the word "ought" be dropped, and in its place phrases suggesting pleasure and profit be used. But you cannot destroy facts of interior experience simply by abolishing the terms which for ages have described them. In the irony of fate, Tyndall's own death, through a mistake of his wife in giving him an overdose of chloral, refuted his theory that people must be judged not by their motives but solely by their acts.

Some ethical writers assure us that freedom to choose between right and wrong is a delusion, the real use of which however they cannot explain. Yet according to the principles of evolution, its universality implies reality and usefulness. Balfour makes excellent use of this argument: "The spectacle of all mankind suffering under the delusion that in their decision they are free, when, as a matter of fact, they are nothing of the kind, must certainly appear extremely ludicrous to any superior observer, were it possible to conceive, on the naturalistic hypothesis, that such observers should exist; and the comedy could not be otherwise than greatly relieved and heightened by the performances of the small sect of philosophers who, knowing perfectly as an abstract truth that freedom is an absurdity, yet in moments of balance and deliberation fall into the vulgar error, as if they were savages or idealists. The roots of a superstition so ineradicable must lie deep in the groundwork of our inherited organism, and must, if not now, at least in the first beginning of self-consciousness, have been essential to the welfare of the race which entertained it." [28]

There is a vast difference between our feelings after an accidental action causing the death of another and after the same act done with malice prepense. One we deeply regret, the other causes self-condemnation and bitter remorse. We known only too well that remorse after wilful sins is no delusion

[28] *Foundations of Belief*, p. 21.

but a bitter reality. Some writers, however, think they can explain it as a useful urging to better life in the future. T. H. Green succeeds in raising a cloud of dust to obscure his illustration of Esau's self-reproach. He says that Esau might well feel remorse for his conduct, for though it was the joint outcome of his character and his environment, yet since his progress of development included his reaction on circumstances, he was bound to regard the act as his own and reproach himself.[29] Spinoza writes frankly that repentance is not a virtue, for it does not spring from reason. On the contrary the man who repents of what he has done is doubly wretched. But like Green and Höffding, who follow him, he held that the delusion of remorse has continued a human experience because it has a use, for it urges men to avoid the sins which have caused such self-reproach. But if character is an unalterably fixed process, then remorse is incredible and foolish, and as the keenest expression of the sense of freedom it will lose its moral dynamic just as soon as men come to know that all acts are fated by divine decree or mechanical necessity.

How utterly abhorrent and impossible such a view is, becomes apparent when we apply it to explain a crime like the Brockton murder, discussed by Professor James: "We feel that, although a perfect mechanical fit to the rest of the universe, it is a bad moral fit, and that something else would really have been better in its place. But for the deterministic philosophy the murder, the sentence, and the prisoner's optimism were all necessary from eternity; and nothing else for a moment had a ghost of a chance of being put into their place. To admit such a chance, the determinists tell us, would be to make a suicide of reason; so we must steel our hearts against the thought. . . . If this Brockton murder was called for by the rest of the universe, if it had to come at its preappointed hour, and if nothing else would have been consistent with the sense of the whole, what are we to think of the universe? Are we stubbornly to stick to our judgment of regret, and say,

[29] *Prolegomena to Ethics,* pp. 99 ff.

though it *couldn't* be, yet it *would* have been a better universe with something different from this Brockton murder in it? That, of course, seems the natural and spontaneous thing for us to do; and yet it is nothing short of deliberately espousing a kind of pessimism. The judgment of regret calls the murder bad. Calling a thing bad means, if it means anything at all, that the thing ought not to be, that something else ought to be in its stead. Determinism, in denying that anything else can be in its stead, virtually defines the universe as a place in which what ought to be is impossible,— in other words, as an organism whose constitution is afflicted with an incurable taint, an irremediable flaw." [30] Thus to pass judgment on the sum total of things as indifferent to all moral distinctions lands us in pessimism. The only escape, he continues, is to give up our ethical judgments, as having no ground in the nature of things and declare optimistically that this is the best possible world. The answer to such perplexities is the frank acceptance of the truly human faith that man, though in body a part of nature and subject to her laws, rises above her mechanical system into the higher realm of spirit. Then conscience will rise in its might and, while bidding us leave the world order to take care of itself, will cause us to abhor and punish all the wilful crimes which men may do.

3. *Affirmation of Practical Life*

The whole question is practical and moral rather than speculative and scientific. *Solvitur ambulando.* The pressing reality of moral evil forbids acceptance of the necessitarian hypothesis, and forces a decision in favor of personality. Determinism saps the spring of ethics, and, as we have just seen, its world-view ends in Pessimism or sentimental Optimism; either theory is inconsistent with a sensitive conscience and energetic activity.

The theoretical denial of free-will therefore is not, as Sidgwick fancied, a matter of indifference. Ethical life, as all humanity has heretofore understood it, would become impos-

[30] *Will to Believe,* pp. 161, 2.

sible under a common belief in scientific fatalism. The modern test of reality and truth is, "will the theory work?" No man dares live out this idea. Responsibility and justice are the basis of the social order, and if the gospel of Necessity were proclaimed from the housetops and accepted by the multitude it would utterly destroy the authority of the moral conscience. Religion would vanish first, for men who have become convinced that they are mere puppets could not believe for a moment in spirit or God. The very words would have no meaning. Mechanical men can think only a mechanical universe. With the loss of their old faith that they were personalities, would follow the loss of that self-respect which belonged to it, and the mob would affect the same cynical contempt for man as man, which the philosophers have long felt for the multitude. The men of the slums would not be content to merely philosophize, as the privileged theorists have been doing, but would proceed to act out the new evangel of brute instincts and animal law. The results would beggar description.

If the speculative intellect proves helpless in this field and serves to perplex us with abstract theories, we must fall back on the deep certainties of the heart, far more convincing to those who feel them than any arguments of the head. The votaries of science warn us against trusting in the feelings and affections, and boast that, disregarding their desires and interests, they aim only at the Truth at any cost. Curiously enough, they overlook the fact that in their own system there is no such thing as Truth in all the universe, for truth and falsehood in the human sense — not the mere correspondence between our "ideas" and outer facts, but moral reality — exists only for free beings, and there are no personalities to think and to will the true, the good, and the beautiful. Truth in the sense of knowledge of external facts is merely material for interesting thought, or useful for profit and loss in bodily comfort or material affairs. Syllogisms help us to deduce new truths from the old, but for the most part they do not touch our deeper selves, except so far as their premises concern moral duty. But in a determined act of difficult volition, a masterful

"I will" or "I will not," we are conscious of our dignity as men; not mere puppets, but fellow workers with God.

The will in such a case is indeed the man; we touch here our deepest self, Kant's transcendental noumenal man, or St. Paul's "I," which approves the law of duty. An act of will, self-determining the life and character, is a psychical fact, a private experience which can only be known through a similar experience. All the great thinkers and poets of the ages have affirmed moral freedom as the very mark of man, but like the Scriptures they recognize that true freedom is not release from all restraint that we may do whatever we will, but the royal law of liberty setting us free from the flaws and fetters of the lower self that we may will and love our highest. This is a freedom which cannot be given us outright, but only as potential in our spirit, which it is the high but difficult task of each soul of man to will and strive to acquire, till he comes to feel that the service of God is in very truth perfect freedom. The highest ethical teaching, realize thy higher self, and the Gospel preaching are at one.

Professor James enforces this view, holding that the all-sufficient justification of belief in moral freedom is to be found in the fact of its necessity to ethical life and human civilization. "Our strength and our intelligence, our wealth, and even our good luck, are things which warm our heart, and make us feel ourselves a match for life. But deeper than all such things, and able to suffice unto itself without them, is the sense of the amount of effort which we can put forth. Those are, after all, but effects, products, and reflections of the outer world within. But the effort seems to belong to an altogether different realm, as if it were the substantive thing which we *are*, and those were but externals which we *carry*. If the 'searching of our heart and reins' be the purpose of this human drama, then what is sought seems to be what effort we can make. He who can make none is but a shadow; he who can make much is a hero. The huge world that girdles us about puts all sorts of questions to us, and tests us in all sorts of ways. Some of the tests we meet by actions that are easy, and some of the questions we an-

swer in articulately formulated words. But the deepest question that is ever asked admits of no reply but the dumb turning of the will and tightening of our heart-strings as we say, '*Yes, I will even have it so.*' . . . The world thus finds in the heroic man its worthy match and mate; and the effort he is able to put forth to hold himself erect and keep his heart unshaken is the direct measure of his worth and function in the game of human life." [31]

(For a discussion of the relation of scientific theories to human personality see Note X, and for Thomson's views on "Brain and Personality" see Note Y.)

[31] *Principles of Psychology,* Vol. II, pp. 573 and 578.

CHAPTER XVI

WITNESS OF CONSCIENCE TO PERSONALITY AND IMMORTALITY

I. CONSCIOUSNESS OF DUTY AND RESPONSIBILITY

The consciousness of duty and responsibility is a fundamental fact in human nature. It was developed, but not created, by social experience. Conscience draws its beginnings and inspiration from a higher spiritual environment and, like life, dominates and determines its own development from within. Like the will it is intensely personal but relates always to others besides the self. The feeling of *oughtness* to render to God and man that which is their due is an inseparable element in personality. It fulfils the same function of creating and maintaining form and order among human units, that gravitation performs amid the elements of matter. Conscience is the focus of personal life, and the generating center of character. It is an intense form of intuition, a most certain and self-evidencing conviction. As Emerson said of it, "The divine origin of the moral law is fully shown by its superiority to all the other principles of our nature. It seems to be more essential to our constitution than any other feeling whatever. It dwells so deeply in the human nature that we feel it to be implied in consciousness. Other faculties fail — Memory sleeps; Judgment is impaired or ruined; Imagination droops — but the moral sense abides there still. In our very dreams, it wakes and judges amid the chaos of the rest. The depth of its foundations in the heart, and the subtlety of its nature in eluding investigation into its causes and character, distinguish it eminently above other principles."[1]

[1] *Journals of Ralph Waldo Emerson.*

We studied under the Anthropological Argument the witness of conscience to God's moral character as the source and basis of righteousness. Here we study the correlative truth that our sense of duty toward God and our intimate relation to Him implies our own spiritual being. We justify our faith in personality by the fact that we have this sense of duty, for it is as truly a trait of mankind as walking upright or the power of speech. Unless the reason of man were fundamentally moral, as it is fundamentally mathematical, the developed life of civilized society were impossible, as impossible as a plant without root and seed, as running without feet, as arithmetic without the certainty that two and two make four. There is an interdependence between social life and ethics. Each demands and develops the other. Only through relations with other persons, our will agreeing or conflicting with theirs, do we come to a true knowledge of our own personality. In all ages and races it has expressed itself in religious faith and duties, in family life, in the organization of the tribe and the state, and in civil laws.

The reality and the authority of the feeling of supreme obligation to do what is felt to be right at any cost to self is not affected by the obvious fact that differing races and civilizations have differing standards as to good and evil acts. We must distinguish between the feeling of "oughtness" to do what seems to us to be the right, and the concrete duties as to which the sense of obligation does vary among different races and ages, according to their stage of ethical culture. The motive in these cases determines the quality of the act. Deeds abhorrent to us may have a motive that explains them. St. Paul expresses this clearly: "And he that doubteth is condemned if he eat, because he eateth not of faith, for whatsoever is not of faith is sin." [2] Faith here means a firm conviction that the act is lawful for the doer.

The important fact is that no tribe has ever been found without the sense of moral obligation irrespective of pleasure or

[2] Rom. 14:23.

pain, just as none has ever been found without the sense of the Divine. Individuals in savage tribes often commit vile and cruel acts, but they do not do habitually and as a tribe anything which their consciences condemn as utterly wrong. It is easy to exaggerate the peculiarities of race morality, but points of agreement among them are greater than the points of difference. In savage races, morality is often tribal; men of other tribes are enemies. Fighting and hunting are the two chief occupations of the savage. While there is much cruelty to enemies and delight in bloodshed, yet they have developed to a high degree the virtues possible in such a condition of life, bravery, patience, endurance, industry, and defense of and provision for those who are dependant. Some writers, like Clodd, consider savages as little better than gregarious animals because they are uncivilized. This is the same mistake as is made by those who look on polite society as lifting an individual *ipso facto* to a higher moral level. But in truth the contrary is often the case, and fine manners may be but a veneer over selfishness, deceit, and lust. Low civilization and low morality are no more identical in savage races than intellectual culture and moral soundness are among ourselves. Comparatively high moral ideas and lives may coexist with a very primitive civil order and even with barbarism. We must not judge backward races by our high ideals of Christian duty, to which we ourselves do not attain, but according to the light of their day.

Human history is a process of ethical and social education, and the progress must be slow in order to be real — not mere obedience to authority but an inner growth in moral convictions. Each step in ethical development is marked by a consciousness of the imperfection of the preceding stages. As moral life develops, the great teachers of a nation condemn earlier unworthy ideas of God. A striking instance of this is seen in the protest of conscience against the immoral elements in the popular religion of Greece. Plato banished Homer and Hesiod from his Republic because of the conception they gave of the gods. The Greek tragic poets also condemned them.

Abraham on the heights overlooking Sodom protested even to the angel of the Lord against action which seemed to him unjust. He was not condemned for his appeal to his own sense of right. It is the glory of Israel that this instance was typical. She could not outgrow her religion, as a system, as the Greeks did, for the prophets of the Lord were her teachers, and their revelation of His righteousness was the mainspring of her ethical growth. Thus she gradually, though reluctantly, learned to subordinate ritual to ethical duty and spiritual religion.

In some early peoples and religions, as we saw, retribution was not connected with the conception of the future state. But in the vast majority of religions, man's craving for justice, his profound sense of the divine source of goodness, developed the faith that God must somewhere and somehow vindicate Himself, and that souls who trust Him will not perish like the brutes. With the rise of this conception, the future life received a vividness and clearness which it did not have before. The idea of progress and happiness in the next world arose, and immortality, based not on selfish grounds but on highest hopes, became a necessity for noble souls, something without which faith itself trembles and grows weak. In spite of the apparent power of evil, the soul felt that there must be some One to whom it could appeal in the certain hope that righteousness would not forever be weak before evil, that right must prove victorious, if not here, then, in the world of spirits beyond, and so the very darkness of earth drove man to look beyond the earth. That God in due time will vindicate His righteousness is part of the revelation of God in Christ. Nothing is more prominent in the Gospel than the certainty that the other world will unveil the everlasting distinctions of good and evil that are half lost in the twilight of this sinful existence.

That the Messiah would judge the world was a central element in the teaching of Christ. It was this ethical element in His Gospel, as much as His resurrection, that " cast light upon life and immortality," and made the latter a real living convic-

tion in the hearts of men, such as it never was in even the highest thought of the Greeks. In Greece the earlier belief in a shadowy future realm, indifferent to moral distinctions, gave place, at least in devout souls, to the thought of a judgment which would determine the soul's destiny for weal or woe forever. Pindar is the first to speak definitely of retribution. He writes: "Victory sets free the fighter from the pain and the struggle, and to the wealth of a noble nature made glorious it bringeth power, putting into the heart of man a deep and eager mood, a star seen far off, a light wherein a man shall trust, if he but know the things which shall be, how that all guilty souls pay penalty for sins done in this upper realm of Zeus, for one there is who judgeth under Earth pronouncing sentence by unloved constraint. The good dwell in sunlight, free from pain . . . but the evil suffer misery, dire to look on."[3] Plato in his *Republic* relates the myth of Er, the son of Armenius, who returns from the dead after twelve days to warn men of the stern justice ruling in the world below.[4] This would seem to bear witness to the popular faith in his day.

In *Œdipus Rex* we find Sophocles picturing the divine authorship of the moral law.

> "Oh! may my constant feet not fail,
> Walking in paths of righteousness,
> Sinless in word and deed —
> True to those eternal laws
> That scale forever the high steep
> Of heaven's pure ether, whence they sprang;
> For only in Olympus is their home,
> Nor mortal wisdom gave them birth:
> And howsoe'er men may forget,
> They will not sleep;
> For the might of the god within them grows not old."[5]

The Eleusinian mysteries were introduced into Greece about 500 B. C. in connection with the worship of Demeter and Diony-

[3] *Olympian Odes,* II:50 ff.
[4] Book X.
[5] Lines 463 ff.

sius. But while they were concerned with the life beyond, and doubtless gave comfort to the initiated, they reached only a select few, who looked down on the vulgar herd and made no attempt to teach them. Plutarch thus quotes Sophocles on the mysteries:

> "Thrice happy they who, while they dwell on earth,
> Have gazed upon these holy mysteries,
> For theirs alone is life beyond the grave,
> Where others find but woe and misery." [6]

In *The Frogs* of Aristophanes there is the following hymn on the life to come for those who had taken the initiatory vow.

> "Let us hasten, let us fly,
> Where the lovely meadows lie,
> Where the living waters flow,
> The roses bloom and grow,
> Heirs of Immortality.
>
> "Since our earthly course is run,
> We behold a brighter sun,
> Holy lives, holy vow.
> Such rewards await them now." [7]

An objection has been raised by Strauss, George Eliot, and many others to the customary views of immortality, and such arguments as those of Kant supporting it, that it seems to advocate a future life as necessary to reward faith and goodness. Some Christians, as for instance Paley, have so written, though Kant did not, as to justify this charge. Reaction against such selfishness has driven many writers to deny that there is another life. Others like George Eliot have argued for a sort of corporate immortality, which she claims to be a higher ethic. This view has never received finer expression than in her words:

> "O may I join the choir invisible
> Of those immortal dead who live again
> In minds made better by their presence; live
> In pulses stirred to generosity,

[6] *De audiendis Poetis,* Chap. V.
[7] Lines 449 ff.

> In deeds of daring rectitude, in scorn
> Of miserable aims that end with self,
> In thoughts sublime that pierce the night like stars,
> And with their mild persistence urge man's search
> To vaster issues."

There is an element of nobility in this wish and hope. It was realized on a large scale in the faith of the early Hebrews, who thought little of their own personal immortality, but worked and prayed for the kingdom of God among their descendants. Public spirited men often give large sums for institutions which shall benefit coming generations, and such a motive has its place and value. The harm comes only when this idea is made a substitute for, instead of a complement of, personal immortality.

The strange fancy prevails in some quarters that this corporate immortality is less selfish than the Christian ideal, because the individual works for a good which he will never see or share. But there is nothing selfish in desiring to see the fruits of one's own kindly deeds. Fairbairn speaks of the strong influence on his own character of his maternal grandfather, whom he never saw, but who was his mother's ideal and inspiration in the bringing up of her son. Can we believe that the grandfather is less noble in aim and character, if now he rejoices to see the working out for good of his life in the lives of others?

It is enough to condemn any such teaching that the motive of such corporate immortality would be without any influence on the lives of common men, who would then care little for anything but self-indulgence. As Renan said: "You will get much less from a humanity which does not believe in the immortality of the soul than from one which does believe." Napoleon Bonaparte, who had certainly a profound knowledge of men, refused to listen to the arguments in favor of "that amazing hybrid, Theophilanthropy, offspring of the Goddess of Reason and La Réveillière-Lepeaux." He made this crushing retort to M. Mathieu, "What is your Theophilanthropy? Oh, don't talk to me of a religion which only takes

me for this life, without telling me whence I come or whither I go." [8] John Fiske exclaims impatiently, "The positivist argument that the only worthy immortality is survival in the grateful remembrance of one's fellow creatures would hardly be regarded as anything but a travesty and a trick. If the world's long cherished beliefs are to fall, in God's name let them fall, but save us from the intellectual hypocrisy that goes about pretending we are none the poorer!" [9]

However, the objection that the hope of personal immortality is disguised selfishness springs from a misconception of its whole spirit. To deny that goodness depends on reward is a very different thing from saying that goodness and truth themselves are transitory things which perish when man dies. No goodness worthy of the name ever did spring from desire for pay, or fear of harm. No true love of God or man can ever be selfish. But in saying this we do not mean that we may not aim at ethical qualities and desire the inner peace and blessedness which they bring with them, just as St. Paul always sought a "conscience void of offense toward God and men." [10] Spiritual qualities bring spiritual blessings — communion with God, peace passing understanding, joy in the service of God, freedom from "the body of death," [11] and power to grow in grace and to realize our noblest possibilities. Such spiritual blessings are included in Christ's Beatitudes, where each grace has its cognate beatitude in kind, as for instance, "Blessed are they that hunger and thirst after righteousness, for they shall be filled." [12] We long for the future life because of the promise it gives of reunion with our lost ones, and the possibility it offers of wide service in the Master's Kingdom, for we are told that when He pronounces His "Well done, good and faithful servant," He makes His reward in terms of opportunity for twice as much continued service. Envy and jealousy would mar Heaven itself, as we learn from the

[8] Rose, *Life of Napoleon I,* Vol. I, p. 252.
[9] *Through Nature to God,* p. 170.
[10] Acts 24:16.
[11] Rom. 7:24.
[12] Matt. 5:6.

Parable of the Laborers. The character of virtue is lowered by selfish working for reward. As Tennyson tells us the desire of virtue is "the glory of going on, and still to be."

"Glory of warrior, glory of orator, glory of song,
Paid with a voice flying by to be lost on an endless sea —
Glory of Virtue, to fight, to struggle, to right the wrong —
Nay, but she aimed not at glory, no lover of glory she;
Give her the glory of going on, and still to be.

"The wages of sin is death: if the wages of Virtue be dust,
Would she have heart to endure for the life of the worm and the fly?
She desired no isles of the blest, no quiet seats of the just,
To rest in a golden grove, or to bask in a summer sky:
Give her the wages of going on, and not to die." [13]

II. THE HOPE OF IMMORTALITY

We cannot prove immortality; we can only give confirmatory hints of a universal hope, hints that can not be put as forcibly as those that make for faith in God. This belief to be clear demands a soul capable of it, and in tune with it. A true and satisfying sense of immortality must be achieved through life, not through intellect. It cannot be taken second-hand. We must stand on the divine side of life, and think from that point of view, before we can be assured and certain of eternal life. "The faith in immortality depends on a sense of it begotten, not on an argument for it concluded," said Horace Bushnell, and Frederic W. Robertson held that, "the nearer you approach the instinctive state, the more indubitable immortality becomes."

James Martineau tells us that man does not believe in immortality because it has ever been proven, but he is forever trying to prove it, because he cannot help believing it. He writes: "Were the problem surrendered to physics and metaphysics, it could never quit its state of suspense; there would be nothing to forbid the future: there would be nothing to promise it; and in such a question this intellectual balance would be tantamount to practical negation. Not till we turn

[13] *Wages.*

to the *moral* aspects of Death, do we meet with the presiding reasons which give the casting vote: here it is that, having got the conditions of the case into right form, we call the real evidence and weigh the probabilities to which it points. When I speak of '*moral*' aspects, I mean all that are relative to the character, either of God as the ordainer, or of man as the self-knowing subject of death. As between beings, Divine and human, standing in spiritual relations to each other, what place does this institute hold, and what significance does it apparently possess? . . . With us human beings, the usual animal order of means and ends is inverted; the inner springs of action, instead of merely serving the organism, dominate and use it: our faculties are set up on their own account, and carry their own ends. From this position I now advance a further step, and say that the divine ends manifestly inwrought in our human nature and life are continuous and of large reach; and, being here only partially or even incipiently attained, indicate that the present term of years is but a fragment and a prelude." [14]

It is not strange that immortality cannot be demonstrated. As Dr. Osler put it in a lecture, " Science is organized knowledge, and knowledge is of things we see. Now the things that are seen are temporal; of the things that are unseen science knows nothing, and has at present no means of knowing anything." On the other hand neither science nor philosophy can give any good and valid reasons against immortality. The facts of life, especially on the inward side, point plainly to a future life, but it is impossible to demonstrate its existence scientifically by verification, for to do so one would have to die, and pass into the future state. This proof, in the nature of the case we cannot have now. But we may meanwhile ponder the many facts of life, and inner experiences, hopes and convictions, which confirm the natural faith in immortality.

The charge is made in some quarters that the interest in the future life is declining, and that many are claiming they de-

[14] *Study of Religion,* Vol. II, pp. 346, 7.

sire no more than this life. But the main ground for such views is probably discontent with the old conception of Heaven as a place merely of rest, or of praise without active service. This is a repelling rather than an attractive thought to the modern man. Nor is it the Scripture teaching, for Heaven is there rightly pictured as a city — the ideal state — with abounding duties and the strength to do them. Confidence in the life everlasting will be restored and become a vital factor in men's conduct if they are taught that every activity of which human beings are capable is a sacred thing, which in the divine ideal of it is altogether noble, beautiful, worthy of all honor, and not destined to perish in the using, but to be trained to ever higher and higher perfection till its scope is illimitable. Thus in Browning's words,

"All that we have willed or hoped or dreamed of good shall exist;
Not its semblance, but itself; no beauty, nor good, nor power
Whose voice has gone forth, but each survives for the melodist,
When eternity confirms the conception of an hour.
The high that proved too high, the heroic for earth too hard,
The passion that left the ground to lose itself in the sky,
Are music sent up to God by the lover and the bard;
Enough that he heard it once; we shall hear it by and by." [15]

The Incompleteness of Life

Our faith in immortality is strengthened by the feeling, that our mental and spiritual equipment is in excess of our present needs. Earth does not offer a field large enough for the exercise of our highest powers and, the more gifted a man is, the more he realizes his failure to attain his ideal. On the earthly plane there is an enormous waste of power, without a parallel elsewhere, for the brutes have only such faculties as are indispensable in the struggle for life; they are not so made as to dream dreams and see visions and aspire to ideals which the speedy coming of certain death mocks at, and stamps as folly. Man transcends in thought all physical limits which bind this body; memory oversteps them, imagination soars beyond them,

[15] *Abt Vogler.*

sympathy forgets them, mathematical thought searches secrets in farthest space and remotest time, and man is at home in the infinite. This freedom from any temporal or spatial limitations is not confined to great minds. It is the peculiar privilege of all human thought, forming its background, though not always present in the consciousness, just as we all live and act under the infinite sky though for the most part we think not of it. This appears from the simple analysis of the four ways in which we set our life at any present moment over against a larger life and world. (1) We are never conscious of our present thought or action without more or less vivid memory of our past life and thought of the years before us. (2) We associate and contrast our individual life with the social organism of the family and the state, which likewise reach far back and stretch forward. (3) The man of thought passes beyond this and contemplates all life, organic and human in contrast with the world-whole, the universe out-reaching us on every side, yet not beyond our thought's grasp. (4) This reach of vision grasping the cosmic process as one whole, a related system of things in time and space, carries with it inevitably the faith or certainty of an eternal spiritual order transcending the physical world as its source and support. Our very feeling of the transitory character of all earthly things arises from our deeper feeling of a higher existence that passeth not but abideth forever.

William James says that "the demand for immortality is nowadays essentially teleological. We believe ourselves immortal because we believe ourselves *fit* for immortality."[16] He thinks that "what Lotze says of immortality is about all that human wisdom can say,"[17] and quotes him as follows: "We have no other principle for deciding it than this general idealistic belief: that every created thing will continue whose continuance belongs to the meaning of the world, and so long as it does so belong; whilst every one will pass away whose reality is justified only in a transitory phase of the world's

[16] *Principles of Psychology,* Vol. I, p. 348.
[17] *Ibid.,* p. 349.

course. That this principle admits of no further application in human hands need hardly be said. *We* surely know not the merits which may give to one being a claim on eternity, nor the defects which would cut others off." [18]

It would impeach the whole truthfulness of Nature, who with her endowments gives the opportunity of their exercise, if there were no realm where the noblest elements in man, reason and spirit, which especially constitute him a human being, could not reach their perfect expression and completion. Goethe bears testimony to this, " My belief in the immortality of the soul springs from the idea of activity; for when I persevere to the end in a course of restless activity, I have a sort of guarantee from Nature that, when the present form of my existence proves itself inadequate for the energizing of my spirit, she will provide another form more appropriate. When a man is seventy-five years old, he cannot avoid now and then thinking of death. This thought, when it comes, leaves me in a state of perfect peace, for I have the most assured conviction that our soul is of an essence absolutely indestructible; an essence that works on from eternity to eternity. It is like the sun,which to our earthly eyes sinks and sets, but in reality never sinks, but shines on unceasingly." [19]

But in reply to such hopes, we are sometimes bluntly told that when all is said, man is an animal and subject to the laws of all animal life. Why should he in sublime self-conceit expect to survive when they perish. But the analogy halts; there is an enormous difference in a vital point. A seed develops duly and orderly into a perfect plant which, having brought forth a flower and then a seed like to itself, withers and dies, its whole work done, its end attained. This cycle is true of man's physical nature also, in all cases where the bodily development runs its full course and a child is born to take the place of the man who dies. But the body and its life is not that which differentiates man from the beast, it is his mind and spirit, and here the analogy fails. No man at-

[18] *Metaphysik*, § 245 fin.
[19] *Conversation with Eckermann, Feb. 4, 1829.*

tains his loftiest mental stature, still less his spiritual ideal.

Even the longest life, is incomplete on its intellectual side. Such a life as Goethe's finds on materialistic principles its best symbol in a broken column — a work well begun but left incomplete. But such a symbol, though common in cemeteries, has no place in Christian thought. Life for children of the Highest can have no broken lines. Measured in time's brief sections the other part is hidden — it does *seem* broken off — but seen as God sees it and as we shall see it one day, it rises upward without a break or flaw.

Even the preparation for man's proper work in the world in full activity is out of all proportion to the time available for that work. Ten years at least are required for intelligence and self-control to replace the instincts and appetites which form the sole guides for the half-animal child, another fifteen years are needed for the physical growth and education and maturity of manhood, thirty or thirty-five years must suffice for the strong and rejoicing exercise of the slowly maturing powers, and the remaining twenty-five belong to the forces of decay, beginning later in some lives than in others, but inevitable in all. This is the record of human life at its best; it takes no account of the hours, totalling years, past in sleep, or lost through sickness or fatigue, and it passes over the multitude of pathetic cases where noble souls are early called away, their promise unfulfilled, their fund of energy, to the human eye, wasted.

So far from men's outgrowing the craving for a larger, unbounded life, as some declare, the progress of science, the conquests of civilization, the garnered fruits of the world's culture, make the future life more than ever an urgent need in strong and healthy souls. The rebellion against "dusty death," the demand for immortality as the only just consummation of life's fragmentary beginnings and many failures, grows more intense as man becomes more conscious of his divine gift of reading the thoughts of his Maker. In the morning of fresh enthusiasms and vigorous power, the student presses forward eager and exulting, and storms the lofty heights of

known science only, like Moses on Pisgah, to die reluctant in full sight of the promised land of wider knowledge and grander power, to fall with palsied hand and weakened eye and failing brain. With all the vast increase of human knowledge and the marvelous expanding of our faculties, our sympathies, and our aspirations, the melancholy fact remains that there has come no increase of years wherein to use them. This is the sad note which Browning strikes in *Cleon,* the poem in which he pictures the wide culture of our day as the lofty watch-tower lifting the man of thought far above the dreary flats of common-place life. "But, alas, the soul now climbs it just to perish there!" seeing all the beauty, craving all the light, eager for the wider reaches of thought and knowledge open to the exulting gazer from the height, but yet not able to do more in proportion to the opportunity than men in the narrower horizon of early days before the stately tower of science was upreared with its wider outlook on infinite space and time. It does seem that to the man,

> "Who seest the wider but to sigh the more,
> Most progress is most failure."

Well may the thinker who limits his outlook to the horizons of earth cry out in bitterness of soul against the limitations of knowledge, against the hard antithesis between the art that is long and the life that is short, and rebel against the fate that weakens his brain or ends his life just as he has acquired the wisdom which comes with years of broadening experience and mature thought.

Cleon, the man of many-sided genius, poet, artist, architect, musician, and author, cries:

> "It is so horrible,
> I dare at times imagine to my need
> Some future state revealed to us by Zeus,
> Unlimited in capability
> For joy, as this is in desire for joy,
> — To seek which, the joy-hunger forces us:
> That, stung by straitness of our life, made strait
> On purpose to make prized the life at large —

Freed by the throbbing impulse we call death,
We burst there as the worm into the fly,
Who, while a worm still, wants his wings. But no!
Zeus has not yet revealed it; and alas,
He must have done so, were it possible!"

But Cleon the pagan, looks with contempt at the Christian who has had the revelation.

"Thou canst not think a mere barbarian Jew,
As Paulus proves to be, one circumcised,
Hath access to a secret shut from us?
Thou wrongest our philosophy, O King,
In stooping to inquire of such an one,
As if his answer could impose at all!
. . . . . .
Their doctrine could be held by no sane man."

We feel instinctively that moral character is the highest, holiest thing we know; that its discipline and perfecting is the one credible aim and purport of the great worlds of matter. The value of the soul and its infinite possibilities is the special revelation of Christianity, which intensified the sense of personality, but noble hearts all the world over have dimly felt it even in the days of darkness. They sadly complained that the divine purpose in respect to man, the realizing of all that was highest in his capacities, fails utterly if this life be all, and in none more clearly than in the noblest, whose imperfect goodness and unrealized aims no one is so ready to admit as they themselves are. We feel with Arnold that resignation is difficult in view of the shortness and uncertainty of human existence,

"A life
With large results so little rife,
Though bearable, seems hardly worth
This pomp of worlds, this pain of birth." [20]

Read such a life as that of John Stirling, unknown to the world, yet blessed with such biographers as J. Hare and Carlyle, or drink in the beauty of such souls as Keats or Sidney

[20] *Resignation.*

Lanier, and then ask yourself whether you can believe that such choice flowers of humanity fully realize the divine idea in them in the short span of their earthly lives. Each of them could say with Browning,

> "I know that earth is not my sphere
> For I cannot so narrow be but that
> I still exceed it."

Arthur Hallam will live forever in the noble *In Memoriam,* the grandest monument ever erected to a human soul. As we read it we share Tennyson's admiration, for we learn through many a word and hint the strength of his character and the wonderful reach and promise of his mental ability. We cannot doubt the poet's comforting reasonable faith that his great powers undeveloped here would find full and exulting activity.

> "In those great offices that suit
> The full grown energies of heaven." [21]

It is as if our body were the scaffolding, and the spiritual nature were the beautiful temple being erected within. Then would we have the strange anomaly of a perfect scaffolding built for a work of holy faith, which itself is never finished, but falls into ruin with the taking down of the scaffolding.

Bishop Butler was the first to state this ethical basis for faith in the future life, though he also defended the metaphysical proof. But Butler did not develop the argument as fully as Kant, who based all the elements of religion, God, the self and immortality on the Categorical Imperative of Duty. Kant's argument is simple:

1. Since conscience commands unconditionally, allows no alternative, no excuse for individual profit or pleasure, we must be able to obey it, *i.e.,* we must be free agents.

2. Since conscience bears witness to a moral law higher than humanity and infinite in its scope, such law cannot be physical. It does not belong to the mechanical order of things. There must be a God, of whose essential being the moral law is the expression, and to whom our spirits are related.

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[21] Canto XL.

3. We know by sad experience that in this world, righteousness does not rule and prevail and bless its servants as it should. A good will is the highest and truest thing on the earth. But that will is weak in itself, is beset by obstacles, resisted by evil men and evil institutions, crushed under miseries, and not blessed with that success and peace which we feel should come to the man who tries to stand on God's side and do His will.

Therefore, unless these thoughts are delusions, there must be a life beyond the life of the senses where the present hindrances will be removed; where duty and the will to obey will have free scope to act; where man can realize his highest; where virtue and happiness, here often sundered, at last shall meet; where the good shall be the happy, and where love shall no longer wear the crown of thorns.

We could not have any sense at all of imperfection, any dissatisfaction with self, any feeling of the transitory character of all earthly things, if we had not within us, a standard of perfection and the feeling of unlimited possibilities, if our inner world did not open out on every side upon the infinite and eternal. We are in Pascal's great phrase "of royal lineage, exiled and discrowned, yet conscious of our higher birth," or in St. Augustine's saying, "Thou hast made us for Thyself alone, and our hearts are restless till they rest in Thee." We can quote the unexpected witness of Renan, to the fact that "man is most religious in his best moments. It is when he is good that he says that virtue must correspond to an eternal order; and it is when he looks upon things in a disinterested manner that he finds death absurd and revolting. How can we fail to suppose that it is in such moments that man gains the highest conceptions?" In another place he writes, "We then say boldly that religion is a product of the normal man; that man is the truest when he is the most religious and most assured of an infinite destiny." [22]

On the other hand, if goodness roots and lives only in human

[22] See an article by Allier in *The Independent,* Dec. 22, 1892.

wills, all ideals, all righteousness, and all faiths must vanish with the disappearance of these wills — a thought which carries with it the loss of faith in God Himself. We feel it cannot be, especially in the light of what we know of the relations between God and man.

Immortality Implied in Any Communion with God

Man's very faith in God carries with it the assurance of a spiritual life, for of all our ideas, none is so useless for purely physical existence as that of God, and it could not arise, as we have seen, from our phenomenal experience. For man to know God, likeness in being is required — only spirit can know spirit. For God to love man — as devout experience testifies He does — human worth is required. The Eternal One does not love ephemera. If the noble souls who have known the loving God most truly and realized His fellowship in the spirit, pass away into nothingness, would not God suffer perpetual bereavement as He buries in continuous succession the unfulfilled promises of His own creation, which must then be reckoned as failures? The long procession of mankind would be naught but an unending funeral train passing before the throne of the Eternal One, who, though called "Our Father," would yet be unable to save His children from disappearance in the empty void.

When the Jews saw Jesus weeping at the tomb of Lazarus, they said, "Behold how he loved him! Could not this man, who opened the eyes of him that was blind, have caused that this man should not die?"[23] The argument is valid. Love which has omnipotence at its disposal is not true love if it permits not simply the body of the loved one, but the spirit also, to perish utterly. Browning has the same thought:

> "He, the Eternal First and Last,
> Who, in his power, had so surpassed
> All man conceives of what is might,—
> Whose wisdom too, showed infinite,
> — Would prove as infinitely good;

[23] John 11:36, 7.

Would never (my soul understood),
With power to work all love desires,
Bestow e'en less than man requires." [24]

Christ gave the Jews of His day who denied immortality an argument they could not refute, "But that the dead are raised, even Moses showed, in the place concerning the Bush, when he called the Lord the God of Abraham, and the God of Isaac, and the God of Jacob. Now he is not the God of the dead, but of the living; *for all live unto Him.*" [25]

Man is the only animal who theologizes, *i.e.,* thinks of and believes in God, and he is the only animal who foresees death and sees beyond it. The two "faiths" are correlative, the expression of spiritual instincts which may be trusted as certainly as the bird trusts the strange impulse that drives it to the far-off South which it has never seen before. This faith of man in his own spirit cannot be explained as due to "sense impressions," for the simple reason that no outer experiences could suggest it, as the psychologists themselves declare. The evolutionists' maxim of utility fails utterly to explain the universal ideas of God and immortality, for man, as an animal, has no more use for that concept than other brutes. It has no relation to his animal functions of eating, self-preservation, and reproduction. Nor does it help him in his purely worldly life, for the believer is not necessarily rewarded on earth. Some men of pure science boast that they have no need of "that hypothesis." But in the realm of the ethical, social, and religious life, it is a most potent and vivifying faith, which justifies itself by its fruits without, and certifies itself to the soul within.

This intercommunion between God and man implies two thoughts converging in one. (1) Man made in God's image is His child, and not merely His creature. Christ showed this by many comparisons between man and the rest of creation, and by His proclamation of God as the Father of all men. Therefore man can know God. (2) God's care for man and His self-revelation to him show God's estimate of him and his

[24] *Christmas Eve.*
[25] Luke 20:37, 8.

worth, for the Eternal would not make friends with the creatures of a day. Man, on earth for but a few and quickly passing years, knows the Eternal One because He has made him but little less than Elohim. This thought that communion with God implies continued life in God, a relation which the mere accident of death cannot break or end, is the strong foundation of faith in an immortality worthy of our hopes.

"Oh, ye that plod, turning the sod,
Your worship lifts you up to God.
Not of the earth had ye your birth,
Others are ye of better worth.
Spirits, not clay,
Children of day,
Not beasts of burden, souls that pray."

CHAPTER XVII

THE WITNESS OF THE HEART AS SEEN IN THE POETS

The witness of the heart, as seen in the higher faith of humanity expressing itself in the poets, is the ontological argument for man's spiritual being, for the great poets give worthy utterance to the unspoken feelings and convictions which lie hidden in the common heart. They are prophets of humanity, and speak on some aspects of religion more deeply, though less clearly than the theologians. The great poets of the world and especially of the nineteenth century were men of spiritual faith in God and man, and their study is helpful to the Christian thinker. The truly great poet is he who gives worthy expression to the thoughts of the mass of men, and they love him because he says for them what they cannot say for themselves. There lies in the heart of the average man a whole world of possible thought and true feeling, more than philosophy can explore, which awaits the poetic insight that can give it expression, and reveal man to himself at his best.

Both philosopher and poet work on the same inner material, drawing spiritual life out of the common consciousness, but they work on different lines. Philosophy seeks to analyze, test and verify our intuitions and spiritual ideas. Poetry takes them for granted. It has high and noble faith in truth, confident that its thought springs out of the common heart of man and that the hearts of men will respond to it. It trusts not to clear-cut argument but appeals directly to the great faiths of humanity. It is in the hidden depths of inspiration and faith that poetry finds its store-house. Matthew Arnold says that poetry is criticism of life, yet not of life on its outer side, but on its deeper side and in its secret sources. The fact

that poets study man, not on the side of the body as scientists do, nor of the mind as do philosophers, but chiefly on the inner side of feeling, gives force to their witness to God and immortality.

The starting point of religion is never mere reason. Man has instinctive faith, the intuition of the divine. The great poets appeal to this underlying faith and awaken it to clear vision, making us realize its deep significance. "The greatest thing a human soul ever does," writes Ruskin, "is to see something clearly and then to tell what it has seen in clear speech. Hundreds of people can talk for one who can think, and thousands can think for one who can see. To see with deep insight and speak with power is poetry, prophecy, religion all in one." It is because the poets are seers, because they breathe the atmosphere of admiration, hope, and love in which men at their highest live, that they afford a witness to the deeper nature of man, and the high and holy things of God, more beautiful in form and convincing in force than any words of the philosophers.

The most hopeful element in the thought of today is that the spirit of the poets is beginning to affect the thought of the thinkers. The singer's clear vision rouses new hope in their hearts and they dare now to sink their shafts of analysis deeper than the intellectual stratum into the profounder world of feeling and will, the elemental nature of man. Professor Höffding in his recent *Philosophy of Religion,* concedes that "it well may be that poetry gives more perfect expression to the highest Reality than any scientific concept can ever do."

When we speak of the poets in this connection, we mean the Christian poets. Here and there we do find in the nobler Greek poets, as we have seen, strains breathing high hopes of the life to come. But such thoughts were the heritage of the few, the many groped in darkness. But the ancient hopes even at the highest never rose into strong convictions, full of inspiration. Nowhere do we realize so clearly the work of Christianity in revealing the truth of life and immortality, as when we compare the ancient and modern poets. Thus there is an in-

finite difference between Homer and Dante. It is not simply that more than two thousand years have elapsed between them, but that the Christian poet stands in the clear light of the eternal world, while the Greek lives in the dim twilight of uncertainty. What characterized the Greek poetry was the vitality of the earth life, full of fresh interest and eager expectations — Hades was a shadow. But of the higher consciousness of the Middle Ages it might almost be said that the two are reversed. Earth is shadowy and Heaven and Hell the reality. Dante's great lessons, it must be remembered, are independent of their local clothing in the ideas and dogmas of his age. He speaks to all men in clearest words of the awful significance of human life, lived in the felt presence of that eternal world to which man in spirit belongs. He sets forth the infinite worth of goodness, and the infinite guilt of sin, and the momentous consequences of our choices in time on our destiny in eternity.

From Dante on to the nineteenth century there is not a great poet in Christendom who can be quoted as a whole on the atheistic or materialistic side. They have their sceptical moods like all who think deeply, but there is " just so much of doubt, as bids them plant a foot upon the Sun-road." It could not be otherwise for they see through the phantom show of things into the abiding realities of God, into the deeper realm of motive and principle, hope and faith, whence springs the ethical and spiritual life. Their world reaches up into the heights and down into the depths beyond the plummet of the senses. Earth does not confine it. Time does not limit it. Even when the world to come is not definitely mentioned, the thought of it is ever present, like the mighty dome of the sky overarching with the infinity of space our petty earth.

This is true of the whole abounding life and thought of the wonderful Elizabethan period and of no writer is it more true than of Shakespeare — most objective of all poets, laying bare the hearts of men, but hiding his own so completely that we cannot tell even in the Sonnets, whether or no we touch the real man. Yet the Sonnets do seem in a few cases to reveal

his own underlying faith. His oft repeated expressions of the transitoriness of all earthly things, such as

> ". . . Everything that grows
> Holds in perfection but a little moment," [1]

seem to demand the certainty of an eternal world. He never fails to bear sincerest witness to the superiority of true character to circumstance, and to that sense of duty which scorns all consequence. That great panorama of human life, just as it is with its tragedy and its comedy, its mighty conflicts within and without, demands as a background divine law and eternal order to account for its profoundly felt significance. The canvas is too large and the noble figures too great for the narrow horizon of earth. The man who could write the sonnet numbered 146 must have had the clearest vision of the truths and realities which alone will survive the passing of the body.

> "Poor Soul, the center of my sinful earth,
> Fooled by these rebel powers that thee array,
> Why dost thou pine within and suffer dearth,
> Painting thy outward walls so costly gay?
> Why so large cost, having so short a lease,
> Dost thou upon thy fading mansion spend?
> Shall worms, inheritors of this excess,
> Eat up thy charge? is this thy body's end?
> Then, Soul, live thou upon thy servant's loss,
> And let that pine to aggravate thy store;
> Buy terms divine in selling hours of dross;
> Within be fed, without be rich no more:
> So shalt thou feed on Death, that feeds on men,
> And Death once dead, there's no more dying then!"

Although Christianity is absent from Shakespeare in clear dogmatic form, the Christian conception of life and duty is everywhere present. Nowhere does conscience appear so definitely in its power to convict as in the tent before the battle when Richard III wakes from his dream to cry:

> "O coward conscience, how dost thou afflict me!
> Cold fearful drops stand on my trembling flesh.

[1] Sonnet 15.

. . . I rather hate myself,
For hateful deeds committed by myself. . . .
My conscience hath a thousand several tongues,
And every tongue brings in a several tale,
And every tale condemns me for a villain." [2]

Or in the effort of the guilty King in *Hamlet* to pray:

"O, my offense is rank, it smells to heaven;
It hath the primal eldest curse upon 't,
A brother's murther! — Pray can I not,
Though inclination be as sharp as will;
My stronger guilt defeats my strong intent;
And, like a man to double business bound,
I stand in pause where I shall first begin,
And both neglect . . .
. . . Then I'll look up;
My fault is past. But, O, what form of prayer
Can serve my turn? Forgive me my foul murther! —
That cannot be; since I am still possess'd
Of those effects for which I did the murther.
. . . . . .
And oft 'tis seen, the wicked prize itself
Buys out the law: But 'tis not so above:
There is no shuffling, there the action lies
In his true nature; and we ourselves compell'd,
Even to the teeth and forehead of our faults,
To give in evidence." [3]

But the Elizabethan outburst of vigorous and lofty thought disappeared as suddenly as it arose, and the practical and prosaic spirit of the people reasserted itself under the influence of Bacon and Locke. Milton indeed is a master who found few comrades, and none who shared his high and noble plane of thought. His "soul was like a star, and dwelt apart." He is the most Christian poet of first rank, large portions of his two long poems being paraphrases of the Genesis narrative of the Creation and the Fall, and the Gospel story of Paradise regained. In his own generation he had great influence, and many of the popular conceptions still lingering concerning

[2] Act. V, Sc. 3.
[3] Act. III, Sc. 3.

Satan, the Fall, and the Atonement are Miltonic and not Biblical. With the change in point of view much of his religious teaching has lost its value for us. This criticism, however, does not apply to the shorter poems, such as the *Ode on the Morning of Christ's Nativity,* or *On Time.*

> "Fly, envious Time, till thou run out thy race:
> Call on the lazy leaden stepping hours,
> Whose speed is but the heavy plummet's pace;
> And glut thyself with what thy womb devours —
> Which is no more than what is false and vain,
> And merely mortal dross;
> So little is our loss!
> So little is thy gain!
> For when as each thing bad thou hast entombed,
> And last of all thy greedy self consumed,
> Then long eternity shall greet our bliss
> With an individual kiss:
> And joy shall overtake us as a flood;
> When everything that is sincerely good,
> And perfectly divine,
> With truth and peace and love, shall ever shine
> About the supreme throne
> Of Him, to whose happy-making sight alone
> When once our heavenly-guided soul shall climb,
> Then all this earthly grossness quit,
> Attir'd with stars, we shall forever sit,
> Triumphing over Death, and Chance, and thee, O Time."

It is a sad and sudden descent from these mountain heights of Christian faith to the dreary level of the commonplace worldliness and prosaic self-complacency of the eighteenth century before the days of Cowper. Its most admired poet was Pope, the mechanical rhymester, with his materialistic and fatalistic *Essay on Man* with man left out. Its one writer with a spark of real genius, Gray, a poetic soul capable of noble work, could meditate in a village churchyard and write an *Elegy,* beautiful in its measured cadences, heart moving in its pathetic picture of the vanity of human life, but as barren of Christian hope and faith as though penned by Cicero or Seneca. Our only heritage in worship from that epoch, except

Addison's *Twenty-third Psalm,* is Hadrian's hymn to the soul which was reset by Pope. Alfred Austin, Poet Laureate, recently stated that in his youth, he could repeat the whole of *The Deserted Village,* the *Essay on Man* and the *Elegy in a Country Churchyard.* They are representative eighteenth century poems, and they are as silent in respect to the great truths of Christianity as though their writers had never heard the name of Jesus Christ, or the sound of His Gospel. Contrast them with nineteenth century lyrics and dramatic poems and we have reason for hopefulness. If Christianity survived that polite indifference, it will surely be impregnable after the glowing and outspoken faith of the Victorian age.

But at eventide it was light. The close of the eighteenth century was marked by the most remarkable revival of spiritual thought in the history of literature. It came with the suddenness of a glorious sunrise and quickening breeze after the suffocating night of damp, low-lying clouds. The first streaks of the dawn are found in Cowper and Thomson, who broke away from the artificial meter and matter of the school of Pope, with its dislike of nature and distaste for simplicity of life. Their muse does not leave the peaceful homes in quiet places for the feverish gaiety and excitement of the town. The kind reception given to *The Task,* and the many friends it won for the shy and morbid poet, shows that the heart of England was still sound.

Cowper is the forerunner of Wordsworth, and many passages describing peaceful rural scenes read almost like extracts from the latter's poems. But he lacks the depths of Wordsworth's nobler thought, though he is more specifically Christian in his attitude to Christ; as in these words where we have the first expression of the immanence of God spiritually present through Christ in heart and soul.

> "Thou art the source and center of all minds,
> Their only point of rest, eternal Word!
> From Thee departing, they are lost and rove
> At random, without honor, hope, or peace.
> From Thee is all that sooths the life of man,

His high endeavor, and his glad success,
His strength to suffer, and his will to serve.
But, O Thou bounteous Giver of all good,
Thou art of all thy gifts thyself the crown!
Give what thou canst, without thee we are poor,
And with thee rich, take what thou wilt away!" [4]

A band of earnest and thoughtful poets arose in the last quarter of the eighteenth century as the result of two great movements, the revival of spiritual Christianity under Wesley and the Evangelicals, and the heart-stirring hopes and faiths aroused by the French Revolution, with its assertion of the rights and dignity of man, ere they disappeared in the gloom of "The Terror" in France and the military despotism of Napoleon. These were the Lake Poets, Byron, Coleridge, Shelley, Keats, and Wordsworth. It was an entirely new feature in English poetry, and to find its like in religious thought we must go back to the Christian Platonists, Henry More and Benjamin Whichcote. The marvel is that a precisely similar movement took place in about the same period in Germany under the lead of Herder, Lessing, Schiller and Goethe, by all of whom Coleridge was greatly influenced. Not all of the Lake Poets are specifically Christian, but even the poets of the Revolt, Byron and Shelley, who are anti-Christian, strike a deeper note and have more faith than Pope or Dryden. Shelley, more sinned against than sinning, for no sympathy or pity was shown him, struck a deeper note than Byron. At the very heart of his revolt against the dead level of things established, is the longing which makes Prometheus exclaim:

". . . I would fain
Be what it is my destiny to be,
The savior and the strength of suffering man,
Or sink into the original gulf of things."

In them all there is the breath of a new spirit, conscious of God's nearness and reality in the great world of nature, its

[4] *The Task,* V: lines 896–906.

Source and Life. They have glimpses of the vast Power at the heart of nature.

> "Which wields the world with never wearied love
> Sustains it from below, and kindles it above."

One evident characteristic of this school was a weak sense of man's personal being as distinct from God. They all incline to the extreme form of the Divine Immanence which dwells so intently on God's presence in nature, that man's own personality shrinks almost out of sight.

Wordsworth is easily the leader of this group. His main characteristic was that his mind was open equally to the world of sense, the finite, and to the sphere of the infinite, which borders on and surrounds our little world, which is a part of infinitude itself. From the sense-world we go out to the boundless in space, time and power. Our own short-coming in the presence of the Moral Ideal gives us the conception of absolute duty and links us by a personal bond to an answering Will. Each finite life truly lived passes under the shadow of infinity. The whole poem *Intimations of Immortality* breathes the profoundest faith in man's spiritual being, carried to the extreme of Plato's faith in the preexistence of the soul. This indeed is the one defect in his point of view, he looks backward rather than forward. *Tintern Abbey* best illustrates the power of insight into the secret of Nature's peace, which comes to one,

> "While with an eye made quiet by the power
> Of harmony, and the deep power of joy,
> We see into the life of things."

In this same poem we see his belief in the World-Spirit as personal, for to him Nature is

> "The anchor of my purest thoughts, the nurse,
> The guide, the guardian of my heart, and soul
> Of all my moral being."

The final words differentiate the thought from pantheism as it appears in Shelley. This personal conception of God underlies the *Prelude:*

"Wisdom and Spirit of the Universe!
Thou Soul that art the Eternity of thought,"

in which he has in mind the Christian ideas of both the Logos and the Holy Spirit. Still more clearly is God conceived as a personal spirit in the grand *Ode to Duty,* which throws the whole emphasis on the ethical character of the Power which creates and sustains the world.

For the most part the Lake Poets were passive spectators, meditating rather than acting. This is one of the limitations besetting the attitude of pure contemplation. They show a lack of interest in man as man, and a disinclination, especially after the failures of the hopes aroused by the French Revolution, to take any active part in life. They opened the eyes of those who were ready for this message, but they held aloof from those who had no sympathy with their point of view. They had no word for the fighter and the worker.

"The eye — it cannot choose but see;
We cannot bid the ear be still;
Our bodies feel, where'er they be,
Against, or with our will.

"Nor less I deem that there are powers
Which of themselves our minds impress;
That we can feed this mind of ours
In a wise passiveness.

"Think you, 'mid all this mighty sun
Of things forever speaking,
That nothing of itself will come,
But we must still be seeking?"[5]

But alas! our age has eaten of the wormwood, which in mystic vision St. John saw fall from heaven into the waters of earth, and they became bitter. Such calm and quiet thought, save for a moment, is impossible for us. Science, which is the tree of knowledge — not of life — has changed the aspect of Nature, which often turns to us a face as stern as that of the

[5] *Expostulation and Reply.*

Sphinx, and suggests dark questions which we must face, but cannot solve.

Meditation is essential to the perfectness of the Christian life, but it should not end in itself. It is meant ever to prompt and rouse men to act. This action is the keynote of the wider outlook and clearer faith of the Victorian poets, a faith that sees God present and ruling, not only in the fixed order of Nature, but in the seemingly confused but ever progressive life of humanity. Our best poetry today is human and dramatic. It loves to dwell in the haunts of men amid their toils and struggles, their conflicts and passions, their sins and virtues. Humanity is its theme, many-sided, perplexing in its mystery, baffling in its frequent perversity and degradation, yet indomitable in its hope. Humanity is ever capable of rising again, and therefore it is worthy of reverence. Our poetry today is theistic not pantheistic, and holds that man is made in God's image. Thus we have another forward movement in the vigorous action and wider hopes and profounder interest in man of the Victorian poets, but without losing that sense of the divine presence which was the noble legacy of their predecessors. At no period in any nation did Christianity so inspire and dominate poetic literature, even in writers not Christian in a technical sense, as in this age.

But the heights of faith were not taken without a struggle, and two noble souls faltered and fell in the conflict. Arthur Hugh Clough and Matthew Arnold, reluctant poets of doubt and sadness, are exceptions to the faith and hope which characterized their contemporaries. They represent the many who were swept off their feet by the sudden appearance in its might of the spirit of science, pointing to her mighty works as a proof of her sole right to dominate all thought, determine all truth, and test all creeds. They are the type of the perplexed souls of whom Liddon said, "They would believe if they only could." They were not blind to the issues at stake, and their awful significance for all that is highest and holiest in human life, individual and social. Through their poems there runs as an undertone "the eternal note of sadness" which

Matthew Arnold heard in the "melancholy, long, withdrawing roar" of the ebbing tide at Dover Beach.

Clough especially dared to face the horror which the new earth-spirit raised, and he recoiled. Bitterly he asks:

> "Is it true, ye gods, who treat us
> As the gambling fool is treated; . . .
> Is it true that poetical power,
> The gift of Heaven, . . .
> All we glorify and bless
> In our rapturous exaltation . . .
> Is, in reason's grave precision,
> Nothing more, nothing less,
> Than a peculiar conformation,
> Constitution and condition,
> Of the brain and of the belly?" [6]

Arthur Hugh Clough was a young man of brilliant promise, who entered Oxford as Balliol scholar. He was an enthusiastic follower of Doctor Arnold, but he found the mass of the students under the influence of John Henry Newman, whose theology was directly antagonistic to the Rugby School. He became the friend of Ward and Jowett and Matthew Arnold, but he did not fulfil the great expectations of his friends. He found the tendency in theological thought was mainly to sacerdotalism — patristic and ecclesiastical — rather than to the broader and deeper conceptions of God and man of Arnold and Maurice. He stood between the old faith and the new, and drifted into the stormy sea of doubt, beset with questions he could not solve, and with no pledge of certainty on which to rest. It is hardly fair to call him an unbeliever, though he was a sadly perplexed sceptic. The majority of his poems deal with Bible characters and topics, always reverently, for his whole spirit is deeply devout. His doubts were intellectual, never of the heart. He warns us out of his own experience with the barrenness of the purely critical spirit when he bids us hold fast the old.

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[6] "*Wen Gott Betrügt, ist Wohl Betrogen.*"

"'Old things need not be therefore true,'
O brother men, nor yet the new;
Ah! still awhile the old thought retain,
And yet consider it again!

"The souls of now two thousand years
Have laid up here their toils and fears,
And all the earnings of their pain —
Ah, yet consider it again!

"We! what do we see? each a space
Of some few yards before his face;
Does that the whole wide plan explain?
Ah, yet consider it again!

"Alas! the great world goes its way,
And takes its truth from each new day;
They do not quit, nor can retain,
Far less consider it again." [7]

Matthew Arnold also felt that the science-spirit, reducing all experiences to quantitative forms of matter and motion, was as fatal to all the higher interests of humanity as it was to spiritual faith. In one pessimistic address, he foretold the passing of pure literature which deals with human life and conduct, and the increasing neglect of human studies in our colleges, under the pressing demand for technical training, the abject worship of the "practical" and all that makes for efficiency and the getting of money. But the revolt of the hearts of both these men against the nightmare of their heads is nature's own protest against such a denial of all that makes man truly man. Their very sadness at the thought of the passing of all high and holy truths is in itself a tribute to the hold which these truths had on their inmost souls. In spite of doubt they strike the same note of duty as the others and call on men to act on the noblest lines they know and never to despair. Poor Clough, heart true, but head perplexed, proclaimed nobly what he did believe, though alas he could not live it.

[7] *Ah! Yet Consider It Again.*

"Hope evermore and believe, O man, for e'en as thy thought
So are the things that thou seest; e'en as thy hope and belief.
. . . . . .
Go from the east to the west, as the sun and the stars direct thee,
Go with the girdle of man, go and encompass the earth.
Not for the gain of the gold; for the getting, the hoarding, the having,
But for the joy of the deed; but for the Duty to do.
Go with the spiritual life, the higher volition and action,
With the great girdle of God, go and encompass the earth.
. . . . . .
Say to thyself: It is good: yet is there better than it.
This that I see is not all, and this that I do is but little;
Nevertheless it is good, though there is better than it." [8]

Arnold also refuses to be paralyzed by doubt, to feel compelled to choose "between madman and slave," between frivolity and superstition. So he bids us hope in *Oberman Once More,* where the spirit of the noble worker for man whispers clearly to Arnold's soul:

"Despair not thou as I despaired,
Nor be cold gloom thy prison!
Forward the gracious hours have fared,
And see! the sun is risen! . . .
What still of strength is left, employ,
This end to help attain:
One common wave of thought and joy
Lifting mankind again!"

One prayer rose up clear and true from his perplexed heart in the noble litany of *Stagirius.*

"Thou, who dost dwell alone;
Thou, who dost know thine own;
Thou, to whom all are known
From the cradle to the grave,—
Save, oh! save."

Clough in his very protest against the ecclesiastical side of Christianity bids man not to lose faith that the prophet long withdrawn in Sinai's darkness, will reappear.

"'Tis but the cloudy darkness dense;
Though blank the tale it tells,

[8] *Hope Evermore and Believe.*

No God, no Truth! yet He, in sooth,
Is there — within it dwells;
Within the skeptic darkness deep
He dwells that none may see,
Till idol forms and idle thoughts
Have passed and ceased to be:
No God, no Truth! ah, though, in sooth
So stand the doctrine's half:
On Egypt's track return not back,
Nor own the Golden Calf.

"Take better part, with manlier heart,
Thine adult spirit can;
No God, no Truth, receive it ne'er —
Believe it ne'er — O Man!
But turn not then to seek again
What first the ill began;
No God, it saith; ah, wait in faith
God's self-completing plan;
Receive it not, but leave it not,
And wait it out, O Man!

"'The Man that went the cloud within
Is gone and vanished quite;
He cometh not,' the people cries,
'Nor bringeth God to sight:
Lo these thy gods, that safety give,
Adore and keep the feast!'
Deluding and deluded cries
The Prophet's brother-Priest:
And Israel all bows down to fall
Before the gilded beast.

"Devout, indeed! that priestly creed,
O Man, reject as sin;
The clouded hill attend thou still,
And him that went within.
He yet shall bring some worthy thing
For waiting souls to see:
Some sacred word that he has heard
Their light and life shall be;
Some lofty part, than which the heart
Adopt no nobler can,
Thou shalt receive, thou shalt believe
And thou shalt do, O Man!"[9]

[9] *The New Sinai.*

We can speak only briefly of the two leading poets of faith triumphant — Tennyson and Browning. Tennyson is the clearest of the great modern poets and most helpful to us, for he fought his way to faith through darkest doubt, and his poems deal with every phase of the nineteenth century's troubled thought. Reared in an ideal home of faith and culture, he came in contact at Cambridge with the chilling doubts and supercilious tone of arrogant young science. Before that was fairly faced and conquered, the death of his dearest friend, Arthur Hallam, plunged him into despair from which he emerged only after many years through the influence of Frederick Maurice. But the victory was won, for he never again doubted the eternal verities, not even when he penned the dark thoughts of *Vastness,* which closes with the frequent note of love clinging to her own and defying fate and death:

"Many a hearth upon our dark globe sighs after many a vanish'd face,
Many a planet by many a sun may roll with the dust of a vanish'd race.
. . . . . .
What the philosophies, all the sciences, poesy, varying voices of prayer?
All that is noblest, all that is basest, all that is filthy with all that is fair?
What is it all, if all of us end but in being our own corpse-coffins at last,
Swallow'd in Vastness, lost in Silence, drown'd in the deeps of a meaningless Past?
What but the murmur of gnats in the gloom, or a moment's anger of bees in their hive? —
. . . . . .
Peace, let it be! for I loved him, and love him forever: the dead are not dead but alive."

His earlier thought is best expressed in some passages in *The Idylls of the King, The Two Voices, The Higher Pantheism,* and *The Vision of Sin.* This last, with its solemn warning of the profound significance of the daily choices which go to determine character, closes with a veiled prophecy,

"At last I heard a voice upon the slope
Cry to the summit, 'Is there any hope?'
To which an answer peal'd from that high land,

But in a tongue no man could understand;
And on the glimmering limit far withdrawn
God made Himself an awful rose of dawn."

Professor Sidgwick speaks of the effect of Tennyson on the men of his time: "What *In Memoriam* did for us, for me at least, in this struggle, was to impress on us the ineffable and irradicable conviction that *humanity* will not and cannot acquiesce in a godless world; that the 'man in men' will not do this, whatever individual men may do, whatever they may temporarily feel themselves driven to do, by following intellectual methods, which they cannot abandon, to the conclusions to which these methods at present seem to lead. The force with which it impressed this conviction was not due to the mere intensity of its expression of the feeling which Atheism outrages and Agnosticism ignores; but rather to its expression of them along with a reverent docility to the lessons of science, which also belongs to the essence of the thought of our age." [10] The value for us in this age of scientific tendencies is that he faced the actual facts and ideas which made against his own faith and did not live in a fool's paradise of untried dreams. Huxley and others declared that he was the poet who had the deepest insight into scientific truths. He honors science,

". . . May she mix
With men and prosper! . . .
. . . Let her work prevail;" [11]

but he warns against trust in mere intellect. He did not blind himself to the all-pervasive power of the spirit of science, even in the seventies. He scornfully refused compromises, clinging to the deep words of Christ, even when they seemed stripped of all meaning through the prevailing denial of Divine and human personality. His own faith was so strong that he dared to give utterance to darkest thoughts of what would be the result should the scientific concept prevail of a universe that is an unintelligible complex of ether and atoms, with no room for

[10] *Alfred Lord Tennyson, A Memoir by his Son*, p. 302.
[11] *In Memoriam*, CXIV.

spirits or for thought beyond the pampered body's needs. Like Job he held fast his sense of righteousness, because it alone gives meaning to human life and inspires man to live as he knows he ought. He is the prophet of moral freedom and asks why, if man is a spiritual being, he may not trust the heart's convictions, the deeper nature within. He dared to make the venture of faith, to trust where he could not see. He willed to believe.

> "For nothing worthy proving can be proven,
> Nor yet disproven: wherefore thou be wise,
> Cleave ever to the sunnier side of doubt,
> And cling to Faith beyond the forms of Faith!" [12]

The line of thought and feeling which brought Tennyson back to faith after his long years of grief is preserved for the comfort of multitudes in the poem *In Memoriam*. "It must be remembered," writes Tennyson, "that this is a poem, *not* an actual biography. It is founded on our friendship, on the engagement of Arthur Hallam to my sister, on his sudden death at Vienna, just before the time fixed for their marriage, and on his burial at Clevedon Church. The poem concludes with the marriage of my youngest sister Cecilia. It was meant to be a kind of *Divina Commedia,* ending with happiness. The sections were written at many different places, and as the phases of our intercourse came to my memory and suggested them. I did not write them with any view of weaving them into a whole, or for publication, until I found I had written so many. The different moods of sorrow as in a drama are dramatically given, and my conviction that fear, doubts, and suffering will find answer and relief only through faith in a God of Love. 'I' is not always the author speaking of himself, but the voice of the human race speaking through him." [13]

The three-fold basis of the poet's faith is given in this poem as (1) the clear consciousness of personal being expressed in the will and ethical life; (2) the witness of the heart, the under-

[12] *The Ancient Sage.*
[13] *Alfred Lord Tennyson, A Memoir by his Son,* pp. 304, 5.

lying world of profound feelings and emotions, which certify themselves as real; and (3) the faith which springs from strong pure love between friend and friend, husband and wife, parent and child, which seems too real, too spiritual for death to end. He thus anticipates the modern appeal to the whole of man, not to the intellect alone, and the modern witness of love to life which dominates our thoughts.

Tennyson is the prophet of the spiritual universe, the preacher of the great fundamental facts of human nature. He rests his faith directly on the certainty of man's spiritual being as revealed in his will, and in his power of love and sacrifice. No poet save Browning so clearly identified the man with the will as his deepest self-expression.

> "O, well for him whose will is strong!
> He suffers, but he cannot suffer long;
> He suffers, but he cannot suffer wrong." [14]

In the Prelude to *In Memoriam* he strikes the highest Christian note in lines that will never die. He thus addresses Christ,

> "Thou seemest human and divine,
> The highest, holiest manhood, thou.
> Our wills are ours, we know not how;
> Our wills are ours, to make them thine."

He returns to this note as fundamental in the last canto.

> "O living will that shalt endure
> When all that seems shall suffer shock,
> Rise in the spiritual rock,
> Flow thro' our deeds and make them pure,
>
> "That we may lift from out of dust
> A voice as unto him that hears,
> A cry above the conquer'd years
> To one that with us works, and trust,
>
> "With faith that comes of self-control,
> The truths that never can be proved
> Until we close with all we loved,
> And all we flow from, soul in soul."

[14] *Will.*

In the second place Tennyson appeals to the heart, our emotional nature on its deepest side, that which comes in contact with the eternal and infinite world.

"If e'er when faith had fallen asleep,
I heard a voice, 'believe no more,'
And heard an ever-breaking shore
That tumbled in the Godless deep,

"A warmth within the breast would melt
The freezing reason's colder part,
And like a man in wrath the heart
Stood up and answer'd, 'I have felt.'

"No, like a child in doubt and fear:
But that blind clamor made me wise;
Then was I as a child that cries,
But, crying, knows his father near;

"And what I am beheld again
What is, and no man understands;
And out of darkness came the hands
That reach thro' nature, molding men." [15]

Lastly we note Tennyson's appeal to love's undying hope. The deepest yet simplest element in Tennyson, Browning, and many others is the personal note, their own experience of love at its highest to move men to noble sacrifice of self.

"Love took up the harp of Life, and smote on all the chords with might;
Smote the chord of Self, that, trembling, pass'd in music out of sight." [16]

The theological basis of his conviction is clear and certain. God is love, and He will not let His loved ones perish; which is the thought which underlies Christ's own words, "He is not the God of the dead, but of the living." Tennyson strikes this note clearly in the opening line of the Prelude, in his special title for Christ, and in what follows, where he makes his strong

[15] *Canto*, CXXIV.
[16] *Locksley Hall*, ll. 33, 4.

appeal direct to God as incapable of deceitfully rousing holy thoughts and lofty hopes only to mock His creatures in mad despair.

"Strong Son of God, immortal Love,
Whom we, that have not seen thy face,
By faith, and faith alone, embrace,
Believing where we cannot prove;

"Thine are these orbs of light and shade;
Thou madest Life in man and brute;
Thou madest Death; and lo, thy foot
Is on the skull which thou hast made.

"Thou wilt not leave us in the dust:
Thou madest man, he knows not why,
He thinks he was not made to die;
And thou hast made him: thou art just."

This gives him his conviction of immortality in which he shall again know the friend he mourns.

"Eternal form shall still divide
The eternal soul from all beside;
And I shall know him when we meet." [17]

He tells us that

"The love that rose on stronger wings,
Unpalsied when he met with Death,
Is comrade of the lesser faith
That sees the course of human things." [18]

One more quotation will show how he yields himself in absolute trust to this love.

"Love is and was my Lord and King,
And in his presence I attend
To hear the tidings of my friend,
Which every hour his couriers bring.

"Love is and was my King and Lord
And will be, tho' as yet I keep

[17] *Canto,* XLVII.
[18] *Canto,* CXXVIII.

Within the court on earth, and sleep
Encompassed by his faithful guard,

"And hear at times a sentinel
Who moves from place to place,
And whispers to the worlds of space,
In the deep night, that all is well." [19]

In our limited space we can barely notice Browning, the most stimulating and suggestive of our poets, perhaps more a philosophic student of the human heart in its strange complexity than a poet proper. There is no writer who will better repay study, if the average reader will confine himself to such portions of his voluminous works as come clearly within his own range of thought. Browning wrote mainly for himself, careless of his readers, and it is but waste of time to attempt to comprehend many of his poems, *e.g., Sordello* or *Red Cotton Night-Cap Country,* and many phrases, also, in poems otherwise clear. But enough that is suggestive of profound thought on vital things remains to occupy a lifetime in some of his dramatic poems and lyrics.[20]

He seems to put both sides of faith and doubt fairly, weighing the pros and cons, but ere long there is always a sudden turn of thought and a most personal note showing on which side he stands.

"Just when we're safest, there's a sunset touch,
A fancy from a flower-bell, some one's death,
A chorus-ending from Euripides —
And that's enough for fifty hopes and fears
As old and new at once as nature's self,
To rap and knock and enter in our soul,
Take hands and dance there, a fantastic ring
Round the ancient Idol, on his base again,
The grand Perhaps! We look on helplessly.

[19] *Canto,* CXXVI.

[20] Such as *Pippa Passes, The Ring and the Book, Christmas Eve and Easter Day, Calaban upon Setebos, The Epistle of Karshish, A Death in the Desert, Saul, The Bishop orders his Tomb, Bishop Blougram's Apology, Cleon, Rabbi Ben Ezra, Imperante Augusto Natus Est, The Flight of the Duchess, Abt Vogler, A Grammarian's Funeral, A Blot in the 'Scutcheon, The Inn Album,* and *In a Balcony.*

There the old misgivings, crooked questions are —
This good God — what He could do, if He would,
Would, if He could — then must have done long since:
If so, when, where, and how? Some way must be —
Once feel about, and soon or late you hit
Some sense, in which it might be after all,
Why not, 'the Way, the Truth, the Life'?" [21]

No writer ever felt more keenly that the proper study of mankind is man, and kept more closely to his text. He stands next to Shakespeare in his scope as a poet of humanity. His men and women are far more real than Tennyson's. They are very flesh and blood, capable of evil, but capable also of repentance and rising again into a larger life. He repudiates all dark dreams of a fated life beyond hope of turning. His creed is that not man alone, but God and man together determine each life, and God never fails to do His part. He is a preacher of repentance and conversion, though he seldom uses the latter word.

"Oh, we're sunk enough here, God knows!
But not quite so sunk that moments
Sure tho' seldom are denied us,
When the spirit's true endowments
Stand out plainly from its false ones,
And apprise it, if pursuing
Or the right way, or the wrong way,
To its triumph or undoing.

"There are flashes struck from midnights,
There are fire-flames noon-days kindle,
Whereby piled-up honors perish,
Whereby swollen ambitions dwindle.
While just this or that poor impulse,
Which for once had play unstifled,
Seems the whole work of a lifetime,
That away the rest have trifled." [22]

The great ideas of Christianity dominate his thought, though his neo-platonic concept of evil as negative and unreal is in

[21] *Bishop Blougram's Apology.*
[22] *Cristina.*

conflict with Christianity's ethical principles. But the Incarnation is central in his thought:

> "The acknowledgement of God in Christ,
> Accepted by thy reason, solves for thee
> All questions in the earth and out of it." [23]

The heart of his belief, like Whittier's and Tennyson's, is expressed in the line,

> "God, Thou art Love! I build my faith on that." [24]

But it is especially as the poet of Immortality, with clear, never-failing vision of the eternal world continuous with this little life, which it crowns and consummates, that he deserves our gratitude. Full of strong vitality and keenly conscious of the personality of individual men and women, he voiced the indignant protest of a strong, healthy nature against the dreary sigh that this life is enough. He approaches his one great theme from every side, directly and indirectly. From *Pauline*, his first poem, on to the noble Epilogue in *Asolando*, which proved his fitting epitaph, he never wavered in his certain assurance of man's spiritual being and God's love for him as His child.

In *Paracelsus* the ground for faith in immortality is philosophic. It is an essentially reasonable belief, man's whole being points to it; to deny it is to make utter confusion on the higher side of thought. *A Grammarian's Funeral* depicts the scholar. who laid firm and deep the foundation of his learning, working with patience and accuracy at which men marveled and mocked. He met their scorn of his "waste of time" by his sublime trust that he had eternity to work and grow in. They cry,

> ". . . 'But time escapes; Live now or never!'
> He said, 'What's time? Leave Now for dogs and apes!
> Man has forever.'"

Abt Vogler, the great musician, using his noble art, as Sidney

[23] *A Death in the Desert.*
[24] *Paracelsus.*

Lanier did, as a means of approach to God, dreams of a perfect harmony in the world to come, which earth cannot give: "On the earth the broken arcs; in the heaven a perfect round." In *The Ring and the Book,* dedicated to his wife as though she were still alive, the life to come appears at the end of the tragedy to be the indispensable clue to earth's perplexities, and the one possible justification of God's strange providence. Pompilia murmurs,

> "O lover of my life, O soldier-saint,
> No work begun shall ever pause for death!"

His faith shines clearly in his brave poem *Prospice* on the death of his wife, his noble comrade in his work. In thought he faces death fearlessly, almost eagerly, certain of reunion with her.

> "O thou soul of my soul! I shall clasp thee again,
> And with God be the rest!"

Browning agrees with Tennyson in resting his faith in God and Immortality mainly on the witness of the will to human personality and the profound significance of true love and sacrifice. Both have the authority of Scripture. "He that loveth not his brother whom he hath seen, cannot love God whom he hath not seen." [25] "Ye do not will to come unto Me that ye may have life." [26] But very early Christian thought under the influence of Eastern asceticism turned away from the Old Testament ideal of the family life which Christ reaffirmed, and placed the tenderest affections of the heart under the ban. Even Protestant Christians of the sterner type have taught the same unchristian idea of a necessary antagonism between love to God and love to man. More to the Christian poets and the witness of the heart, clinging to its own dear ones, than to the theologians, do we owe the recovery in the nineteenth century of the real meaning of St. John's deep words, "He

[25] I John 4:20.
[26] John 5:40.

that loveth not, knoweth not God, for God is love."[27] They point ever to this way of approaching God and knowing His truth.

> "Were reason all thy faculty,
> Then God must be ignored;
> Love gains Him at first leap."

The true poet is a prophet or revealer of God, and he often speaks more deeply than he is aware when stirred to his depths by some great experience or bitter grief. It is the glory of our literature on the side of faith that so many of its greatest poems are elegies, outpourings of sorrow over a loved one lost to sight, yet at the same time full of faith triumphant over death, soaring aloft like the lark to meet the dawn out of the very chasm of the grave. It is a noble list; Milton's *Lycidas,* Shelley's *Adonis,* Matthew Arnold's *Thyrsis* (on Arthur Hugh Clough) and *Rugby Chapel* (on his father), Tennyson's *In Memoriam,* Lowell's *Lines on Channing,* and Emerson's *On the Death of His Son.*

Most striking also are the many swan songs written when the poets stand consciously or unconsciously on the threshold of death. Even the doubters seem to have prophetic glimpses of the land beyond, and seeing light not darkness, they speak words of hope and not despair, as did Clough in his last sonnet written at Florence.

> "For while the tired waves, vainly breaking,
> Seem here no painful inch to gain,
> Far back through creeks and inlets making,
> Comes silent flooding in, the main.
>
> "And not by eastern windows only,
> When daylight comes, comes in the light;
> In front the sun climbs slow — how slowly;
> But westward look! the land is bright."

Then there is Whittier's tribute to Oliver Wendell Holmes

[27] I John 4:8.

near his own end, and Longfellow's *The Bells of San Blas,* written a fortnight before he died.

"Oh, bells of San Blas, in vain
Ye call back the past again;
The past is deaf to your prayer.
Out of the shadows of night
The world rolls into light;
It is daybreak everywhere."

This reminds one of the *Hymns to the Marshes of Glynn* sung by Sidney Lanier on his couch of pain and death,

"How dark, how dark soe'er the race
That must be run,
I am lit by the sun."

Browning sounds a trumpet note in the Epilogue to *Asolando* which closed his works and life, "Speed; fight on; fare ever There as here." And lastly, most familiar of all, is Tennyson's *Crossing the Bar.*

"Twilight and evening bell,
And after that the dark!
And may there be no sadness of farewell,
When I embark;

"For tho' from out our bourne of Time and Place
The flood may bear me far,
I hope to see my Pilot face to face
When I have crossed the bar."

CHAPTER XVIII

THE DENIALS OF THE SPIRITUAL IDEA OF MAN[1]

DENIALS OF FREEDOM

The denials of the freedom of the human will are of three kinds, according to the fundamental conception from which the reasoner starts. There are the denials made from the scientific standpoint, which have a physiological basis. There are those from the philosophical point of view, with a psychological foundation; and finally, the pantheistic denials, which are primarily theological in conception.

I. Scientific, Physiological Denials

These denials are sometimes called "hard determinism," for they claim man to be under the stern rule of external necessity. They are based on the law of causation, and every phenomenon, mental or physical, is said to be the necessary or invariable result of preceding physical antecedents. It is the favorite contention of physiological psychologists. There are four chief arguments which can be treated separately, though they run together in ordinary thinking.

1. *Freedom unthinkable and unprovable*

Those who hold consistently to mechanical monism flatly deny that freedom of the will is provable, or can even be conceived. As early as Hume we find it declared that men begin at the wrong end of the question of liberty when they approach it by examining the "faculties of the soul"; we should begin with the operations of the body and unintelligent matter. This

[1] The denial of personal identity was discussed in Chap. XV.

theory holds that there is no gap in the physical order where freedom may interpose. The whole thought process, deliberation, decision, and execution, depends on purely physiological causes and is as determined and inevitable as visible changes in the body. As one advocate has put it: "There is no such thing as free will. In the light of the monistic philosophy those phenomena which we have been accustomed to consider the most free and most independent, the manifestations of the human will, are subject to laws exactly as rigid as those of any other phenomena in Nature."

Freedom is, then, unthinkable and unprovable. But this is true of all the ultimate facts of consciousness. To deny the reality of an affirmation of the universal consciousness simply because we cannot understand it, that is, state it in terms of sensation, is to beg the whole question of the possibility of spiritual being or powers. It is no objection that we cannot form a picture of what takes place in will action, for what we can intuit is never more than the *fact* of the action.

Physical science overlooks the fact that psychic experiences lie beyond the reach of its study. I cannot doubt the affirmation of my consciousness that "I," as a personal cause, can carry into execution a certain course of action out of the many which arise in my mind. Hence we claim that will action does have a cause, but this cause is the *ego*, as psychic as is the will itself. When confronted with this ultimate analysis the physiological psychologist can only deny the validity of the belief in the self, as Herbert Spencer does: "Unavoidable as is this belief, established though it is, not only by the assent of mankind at large, indorsed by divers philosophers, but by the suicide of the sceptical argument, it is yet a belief admitting of no justification by reason; nay, indeed, it is a belief which reason when pressed for a distinct answer rejects."[2] This simply demands that we believe only in what we can understand and can state in terms of physical science. But what if physical science does not cover all truth and all experience?

[2] *First Principles*, § 20.

On what does a verdict of sense rest for its own boasted certainty, but consciousness itself? That we are free all our experience affirms; that we are not free is simply the dogmatic affirmation of science on the ground that purely materialistic principles do not permit such a belief. As Professor Graham acknowledges: "In spite of the speculative conclusion that the will is not a free causal agency, is there not the equally clear practical conviction that man can control the course of his life and actions to some considerable degree? I think we must admit it." [3] Professor Poynting likewise contends for the acceptance at its full value of this psychical fact. "I hold that we are more certain of our power of choice and of responsibility than of any other fact, physical or psychical. . . . We are certain, all of us, in everyday life, that this power of choice exists, whatever conclusion we may come to in the quiet of our studies. It appears to me equally certain that there is no correspondence yet made out between the power of choice and any physical action, and there does not seem any likelihood that a correspondence will ever be made out. . . . Every time an intention is formed in the mind and a deliberate choice is made, we have an event unlike any other previous event. Freedom of the will is a simple fact, unlike anything else, inexplicable." [4] Being thus unique, unlike all outer experiences, it cannot be explained scientifically, for scientific explanation consists simply in classifying together like phenomena. But these will experiences, sharp and clear, refuse to be thus classified. It is just as much the duty of the true scientist to recognize these unlike phenomena as to recognize the common and easily classed events. When this is pointed out the experimental psychologists claim that though they cannot prove their contention, yet scientific continuity demands the exercise of the scientific "faith" that all life is mechanical. But such faith has no place in science, where ascertained truths and working hypotheses alone are legitimate.

Höffding has shown the difficulty involved. "The will as

[3] *Creed of Science*, p. 145.
[4] *Hibbert Journal*, July, 1903, pp. 743, 4.

such, our activity as the activity of a conscious being, cannot be an object of immediate self-observation like ideas and feelings. We observe the motives and the result of the will, but not the will itself, just as in the sphere of material nature we observe the conditions and phenomena of energy, but not energy itself. . . . The reason why we cannot make the will the object of self-observation like sensations, ideas, and feelings may lie in the fact that the will as a persistent presupposition envelops all the changing states and forms of the conscious life. Consciousness exists only on account of the uninterrupted work of collecting the single elements into a totality. Such a work of combination and concentration is evident in the simplest sensation as much as in every ideation, every feeling, every impulse, every determination. At every point an activity manifests itself, which is just as original a phase of conscious life as the elements (phases or attributes) which observation and analysis directly light upon."[5] The very fact that we can form the concept of energy is due to the fact that we have already used that idea in the form of will; for every psychical operation is an act of will.

2. *The universality of causation*

This argument holds that every phenomenon is linked to all others in the relation of cause and effect, and that psychical phenomena are no exception. It has already been discussed as relating to physical nature.[6]

Three things can be urged against such a view. First, efficient causation itself is denied by logical empiricists. We have seen how Hume plays fast and loose with cause and effect; denies it in nature, affirms it absolutely in mental action.[7] Mill and Bain argue that we have no proof of force, and that events are related merely as antecedents and consequents. Philosophical analysis, instead of finding all causative agency limited to matter, fails to see any force whatever in nature,

[5] *Problems of Philosophy,* pp. 55–57.
[6] See Chap. III.
[7] See Note C.

except such as is inferred from the analogy of our will-force. We see only a succession of changes. That there is a causative energy producing the effect is an idea which the mind reads into the phenomena out of its inner experiences. But if force is not something tangible and visible to the senses, and yet cannot come from within if the mind itself be purely passive, as the theory holds, whence can come the strange idea of power to act which is our earliest and most intense experience?

In the second place, the theory denies the significance of deliberation before important action, a most certain and, at times, painful experience. The difference between the mental and material worlds is ignored. Motives are treated as if they were "motors," a term of physical force suggesting the compelling of the will to a certain course of action. For the sake of clearness it would be wise to drop the word motive, which suggests power, and use the word "reason." Motives are thoughts or desires which the *ego* considers and weighs, deciding at last which one it will follow. As the will is not a mechanical force, it cannot have a mechanical antecedent. The voluntary act is abrupt, spontaneous, and intentional. The time and choice of methods of its execution are freely determined after deliberation. Consequently the originative and directive force must be a kind of power distinct from the mechanical, *i.e.*, it is psychical. Wundt states that we have no right to apply a purely physical law to internal experiences, for they contain certain psychical elements which are entirely lacking in natural phenomena.

In the third place, we see that the same begging of the question underlies the further conclusion that free-will is logically incredible, because it implies change and action without any efficient cause whatever — as Jonathan Edwards argued. But the whole quibble is exposed, if we simply grant the first affirmation of every unsophisticated consciousness, that the *ego* is itself an active agent, the only agent in fact whose expression and manifestation is deliberate volition. The will is not a "faculty," but the *ego* energizing. In the *ego* we are face to face with a mystery felt to be inscrutable, a mystery

the more profound the greater the effort we put forth to compass it. If what we call the will be simply the self as it flashes into conscious act, then plainly the fact of freedom is not one to be expressed in terms of mechanics. If we grant the mystery of the *ego,* the property of freedom cannot be held to be impossible *in se* merely because it is inexplicable as the *ego* itself. What sort of logic is it which, admitting a mystery, insists that it shall not be mysterious in its qualities? Locke's short phrase, "we know not the way of the will," is certainly no justification for our refusing to accept freedom on the ground that we cannot comprehend it. We are content to reply, "our wills are ours, we know not how."

3. *The predictability of human actions as shown by statistics*

This objection to freedom is modern, and is based on the tables of statistics so much used today. It throws emphasis on the outer environment, whose conditions influence men in the mass, determining their actions. The constancy of the actions is supposed to be indicated by the common averages of social phenomena, such as marriages, divorces, suicides, thefts, failures, etc. This is supposed to prove that men like animals in droves are completely controlled by outer forces or physical motives. Man therefore is a part of physical nature, obeying her inevitable forces, and his actions are predictable.

But the fallacy is obvious. Aggregate action in a multitude is confounded with the action of individuals who can each resist the common influences. Human nature being common to all, men exposed to common motives, pleasant or painful, react to them in similar ways. Uniform conditions tend to produce uniform motives and similar actions, but uniformity is not necessity. At certain hours enormous crowds go across the Brooklyn Bridge under similar motives, but any individual or any number of them, may determine not to obey the common impulse on particular occasions. Each night a varying number of the same general crowd do not go over at the usual hour, and always for a personal reason. Hence the "motives" cannot be irresistible. Each man out of the thousands who

make up a statistical table is free to determine whether he will take his place in the ranks of the average per cent. The exceptions here emphatically prove the fact of freedom of individual choice and initiative as over against outer circumstances. Statistics prove that men act with reasons, not without them.

Facts when averaged out of millions of cases, cease to be human facts; they stand in no relation to us, dealing as they do with masses, never with individuals. The statistician purposely ignores individual cases, and eliminates "accidental variations." But the whole problem turns on the individual. It is the personalities with their individual wills who resist the environment, and so give evidence that they are not puppets. In cases like the rise of the marriage rate in prosperous times, the plain inference is that men act with reasons, not mechanically under external forces.

4. *Free-will is another name for chance, and chance is chaos*

This assumes *a priori* that "the reign of law" forbids all possibilities of alternative action. Thus John Fiske in his earlier days declared, "No middle ground can be taken. The denial of causation is the affirmation of chance, and between the theory of Chance and the theory of Law, there can be no compromise, no reciprocity, no borrowing and lending." [8] Here again the whole argument turns on the assumption that a fixed and mechanical order rules throughout the universe, in human thought and action as inexorably as in the relations of material bodies. It falls to the ground, if a spiritual order above nature be granted, such as Fiske does admit later in his Concord Lectures.

It is obvious that men do act on the world about them. But the rock of offense to the scientific mind is the claim that such action on the fixed order of nature is "free"— the expression of reason and purpose, not the fated result of the forces and laws which play upon men within and without. We could not ask for a better example of what Bacon called the "idol of the

[8] *Cosmic Philosophy*, Vol. II, p. 187.

den." What does this ill-omened "chance" mean? In the world of nature chance means whatever happens by mechanical physical cause aimlessly and to no purpose; what we would consider accidents. The proper meaning of the word in regard to human beings is simply undetermined possibility. Before I make a decision among many courses of action, all of which are possible, there is uncertainty as to which I shall do. My final choice may seem "chance" to an observer, but not to myself. But the word is used by Fiske as an opprobrious term for acts of human free will, anarchic and not fated in nature's order. He applies the chance of the physical order to its very opposite in the human order. How can the same word mean opposites? Only because the monists lay down the postulate that there is no difference between the world of nature and the world of man. The whole universe is mechanical, permitting no mind action, for that would bring in mental forces and powers acting under other principles than physical causation, producing confusion in a machine world and disturbing its beautiful symmetry, just as physical forces working by chance disturb the harmony of our human world. Aristotle uses the word with the proper distinction: "The principles of causation seem to be nature, necessity, chance, and, moreover, reason and human agency." [9]

Before any doubtful course of action I have open to me several choices and all are possibilities to my individual will. I feel I can select any one of these and make it an actuality. But here the protest of physical science becomes vehement. It says that there are no *possibilia* in the sense that I may cause any one to happen which I choose. The *futurabilia* are already determined by my inner and outer conditions and can no more be altered than the *facta*. *Possibilia* are already *determinata* waiting their fixed time for coming into the world of *facta*. But I am certain with a conviction interwoven with my sense of freedom that any one of many possible acts are open to me. If science declares that I am utterly mistaken,

[9] *Nicomachean Ethics*, Bk. III, Chap. 3.

that I must do the one that is fated, all others being impossible, I ask what does science know about the matter. Let her keep to her own field of *facta*, the things which have been done; she has nought to do with *possibilia*, the things which may or may not be done. She cannot penetrate into my consciousness. If I ask how she knows that there are no uncertainties, she reiterates as of old her affirmation, "they are impossible."

This scientific nightmare, that if anything happened other than that which was predetermined, chaos would result, ignores the commonplace fact that all the alternatives before a sane mind are equally possible as outer acts, for all fit into a framework of nature which is supremely indifferent as to which choice we make. Nature admits any of the multitude of activities open to men. Even in the world of history we cannot say that only one course is open to men of action without causing permanent confusion. If Cæsar had not been murdered, or if Moscow had not been burned, history would have been changed, but the stream of onward movement would have been just as orderly, though on different lines.

In ordinary life our decisions, for the most part, concern only trifling things, but still if these are freely decided after deliberation, it follows that we have equal freedom in great things — great to us on moral grounds. So, too, the simplest act affecting nature, as the planting or cutting down of trees, if it happen through our free-will, is as much a "miracle" as the blowing up of a mass of rock. The greatness of the act is not the point at issue.

Any such power at all, the determinists urge, would be anarchy. It would add another force to the sum total of force in the universe and thus would violate the law of the conservation of energy. The answer to this claim is simple. No one claims that the will *creates* energy, but simply that energy is stored up in organic life, and that our wills release it, or direct it along different channels according to our design. If we can store up enormous energy, as in dynamite, and release it by the slight pressure of a child's finger on an electric button, as

when the Hell Gate rock was blown up in New York harbor, why may not the human body be a store-house of subtle energy subject to the human will? We know nothing of the marvelous qualities of the brain save that it is adapted to be the organ of the mind, which can act directly upon it, and cause bodily actions which in turn affect nature. We do not claim that the brain in any sense creates force, but it may easily be a center of energy stored up by regular bodily processes, which the will releases.

Sir Oliver Lodge and Professor Poynting hold that there is abundant evidence that life is a directive power, controlling energy and guiding it to definite ends. Lodge writes as follows: "My contention then is — and in this contention I am practically speaking for my brother physicists — that whereas life or mind can neither generate energy nor directly exert force, yet it can cause matter to exert force on matter, and so can exercise guidance and control. . . . Guidance of *matter* can be effected by a passive exertion of force without doing work; as a quiescent rail can guide a train to its destination, provided an active engine propels it. . . . Energy must be *available* for the performance of any physical operation, but the energy is independent of the determination or arrangement. Guidance and control are not forms of energy, nor need they be themselves phantom modes of force: their supposition upon the scheme of physics need perturb physical and mechanical *laws* no whit, and yet it may profoundly affect the consequences resulting from those same laws. The whole effort of civilization would be futile if we could not guide the powers of nature. The powers are there, else we should be helpless; but life and mind are outside those powers, and by prearranging their field of action, can direct them along an organized course." [10]

Similarly the French writer Courbet shows that there is really a place in the organization of the universe for the manifestation of activities independent of matter. Such activities,

[10] *Life and Matter,* pp. 148–9.

he maintains, would be impossible only if the sum of all forces of the universe were unalterable; which is not true, force being only one of the factors of energy. He says: "The will of intelligent beings is thus a force acting upon matter; and the appearance or disappearance of this force has nothing to do with the constancy of energy. Free individuals, to reach their ends, use the total of the energy in the world, but they need neither to increase nor diminish it. . . . It is as absurd to say that they cannot use this energy because it is constant, as to assert that man cannot move about in the water because the mass of the ocean is invariable. Again, though science teaches that the sum of the energy in the universe is constant, it also teaches that this energy is continually in transformation. Why should not human activity be one of the agents of these transformations? . . . And why should this faculty of transformation not suffice to assure the free exercise of this activity? If I want to go from Havre to New York I take coal and I transform the heat-energy that results from its combustion into energy of translation, that is, into motion. I do not have to create or to dissipate energy; it is sufficient to transform it, and this transformation assures me the free exercise of my will power." [11]

II. Philosophic, Psychological Denials

In contrast with the scientific denials these are often grouped under the name of "soft determinism." In general they hold that man is free in so far as his conscious will is not controlled by any external force, but not free as to following or not the strongest motive. What motive shall prevail is determined by his character. Self-determinism is simply self-expression. The character itself is determined by heredity. These are the common views of many modern psychologists and writers on ethics.

1. *The will is determined by the strongest motive*

This is the oldest and simplest form of determinism. Since

[11] *Cosmos,* Paris, Aug. 25, 1906.

the *ego* is beset by many motives, it seems natural to argue that the motive which is followed prevailed because it was the strongest. The so-called will is entirely passive, it is merely the pointer on a pair of scales, which are filled with motives *pro* and *con*, till one side overbalances the other, when the will turns to that side, and a volitional discharge takes place. The will is only an effect, not a cause. It is the mere expression of mental action, as the hands on the face of the clock exhibit the exact preponderance of the action of the works within.

This theory received early statement by John Locke and Jonathan Edwards. The latter defines the will as that by which the mind chooses anything, and states that the will can never disagree with desire. His argument is as follows. If the will be determined, there is a determiner, for every effect must have a cause. If so, the will is both determiner and determined; it is a cause that acts and produces effects upon itself, and is the object of its own influence and action. If there is an act of the will in determining its own acts, then one free act of the will is determined by another, and so we have the absurdity of every free act, even the very first, determined by a foregoing free act. But if there is no act or exercise of the will in determining its own acts, then no liberty is exercised in determining them. Whence it follows that liberty does not consist in the will's power to determine its own acts; or, which is the same thing, that there is no such thing as liberty consisting in a self-determining power of the will.

Fiske in his *Cosmic Philosophy* follows Edwards, thinking that the idea of freedom can only be shielded from the charge of arrant nonsense by such a crude conception as the following. "Over and above particular acts of volition, there is a certain entity called 'The Will,' which is itself a sort of personage within the human personality. This entity is supposed to have desires and intentions of its own. . . . This autocratic Will is 'free,' and sitting in judgment over 'motives,' may set aside the stronger in favor of a weaker, or may issue a decree in defiance of all motives alike." [12]

[12] Vol. II, p. 174.

The underlying fallacy lies in treating the will as an entity or faculty in itself, whereas that which really acts is the *ego*. It is a fact of every man's consciousness, though most mysterious, that the "I" is self-moved. We say, and every one understands, "I love myself," "I judge myself," "I determine myself" (*i.e.,* will and act). On the determinist theory the will is passive like a weathercock surging round with every gust, till a steady gale holds it firm. Edwards does not dream of the possibility that the "I"— not the will — may throw its decision on the weaker motive and make it prevail over the stronger, the still small voice over the storm of passion.

Language itself forbids our thinking of the self as purely passive. Even Bain speaks of a veto on immediate action after a decision, but who says "veto," if we follow only the strongest motive. Various efforts have been made to change the words in common use, so that the new theories might be swallowed more readily by the general public, like sugar-coated pills. J. S. Mill in his autobiography tells of the dejection into which he fell because "the doctrine of what is called Philosophical Necessity weighed on his existence like an incubus." He obtained relief in his own mind only when he drew "a clear distinction between the doctrine of circumstances and fatalism; discarding altogether the misleading word Necessity."[13] Sully proposed abandoning the term necessity and substituting "determination." Bain also refers to the "obnoxious words liberty and necessity as being to blame for the mystery in the matter." It is a credit to these English students that they recoil from fatalism, but no amount of verbal legerdemain will relieve their doctrine from it in the last analysis.

The fatal difficulty in the theory, as Villa points out, is the impossibility of finding a common measure for the vast variety of motives which appeal to men. Locke and Edwards think they solve the problem simply by classifying all motives under pleasures and pains. But intensity of feeling or promise of

[13] pp. 168 and 170.

pleasure and profit will not serve, for the sense of moral duty, by which men act, is never "stronger" than the passions and appetites. Our desires and our experiences are too complex to be so simply grouped. What relation do the pleasures of the senses bear to the pure joys of the mind, or the faiths and longings of the soul? True men are not swept away helpless before them, but resist them firmly in obedience to the still small voice of duty and honor. Martineau says that the will has to live and move among objects which, in their pleasurable or painful aspects, are perfectly heterogeneous, and are no more measured by one common standard than light, weight, and electricity are measured by the thermometer.

To say that the strongest motive is ever that which prevails is to beg the question. Motives are not causes of actions, but reasonable grounds for action between which the causal self weighs and decides. The determinists assume that to choose freely is to choose irrationally and incalculably. This would reinstate chaos, they say. This assumes that indeterminate choice is the same as motiveless choice. But this is neither logically nor psychologically correct. It may be hard to choose not from lack of motives but from excess; the suspense of the will may be due, not to apathy and lack of interest, but to clash of conflicting desires. It is surely a strange confusion which lumps together two such different cases. To have no cogent motive for deciding either, and to be distracted by strong but contrary impulses, are surely different as conceptions, different as experiences, and different in their results. The mind of the man who has no motive is a blank; that of the man who has conflicting motives is a tumult. The act of the former seems capricious and incalculable; that of the other seems reasonable and perfectly calculable. Whichever way his decision falls, his friends (who think they know him) will say it was just like him; that it might have been foreseen, and, in short, was thoroughly rational and calculable.

2. The will is the necessary expression of character

This, it is claimed, is the only rational idea of freedom.

Each man is free to do what he desires, but not free to will what he shall desire. Thus Spencer writes: "That every one is at liberty to do what he desires to do (supposing there are no external hindrances), all admit; though people of confused ideas commonly suppose this to be the thing denied. But that every one is at liberty to desire or not to desire . . . which is the real proposition . . . is negatived by the analysis of consciousness."[14] The upholders of this view include Hegel, Bradley, Green, the two Cairds, Paulsen, Höffding, Wundt, and Leslie Stephens.

This is a great advance on the preceding view. Motives are not regarded as independent and controlling pulls and pushes to and from pleasure and pain. They are the logical products of the individual mind and life in all its experiences and inmost constitution. The strength of the motive which prevails lies not in itself but in its peculiar appeal to the individual's character. It is what he wishes to do, and he wishes that particular thing because it accords with his character. His freedom of will consists in his being able to do what he desires to do.

This is the most plausible form of determinism, and is urged by the majority of philosophic writers as the only intelligible theory. They insist that alternative choice demands alternative character. Freedom, or the power to change one's usual mode of action, means the denial of the persistence of habit and the constancy of character, and leaves us without a guide in judging men. At no time has man any influence whatever on his character. Nothing seems so plausible as the maxim that "each man acts out his character in accord with himself." But as soon as we ask whence comes the character, then the disguised fatalism of the theory appears. Common men think of character as itself the product of morally free acts, good or bad, done so often that they have become habits of conduct, which they believe can be modified to some degree. But the idealistic determinist does not admit that a man has any

[14] *Principles of Psychology*, § 219.

influence at any time upon the "self," which they call his character. At each moment he must act as he does because he is what he is, and what he is depends inevitably on what he has been in all his past. Thus we arrive at the vision of an inner fate, which is just as destructive to ethical life as any scientific determinism.

The Neo-Hegelians fight shy of plain speaking on this point, but fatalism is involved in their whole system; and a clear perception of it is the all sufficient answer to them, for we cannot accept any theory, no matter what fine phrases disguise it, which makes us mere puppets, worked by automatic strings within. Green, however, openly identifies the self and the character, saying that a man's character is himself, showing itself in his will. Man being what he is and circumstances what they are at any particular moment, the determination of the will is already given, just as an effect is given in the sum of its causes. The determination of the will might be different but only through the man being himself different. The will, therefore, is simply the man, any act of will is the expression of the man as he at the time is.[15]

William James, A. J. Balfour, and all Christian philosophers, protest in the interest of ethical life against such a system. The former writes: "If my action follows, as absolute Idealism declares, inevitably from my character at this moment, and my present character in turn is determined in a like inevitable way by my character of yesterday, and I have therefore never had the slightest option as to the kind of character imposed upon me, then you may call my behavior at any time æsthetically beautiful or ugly, but morally good or bad it cannot be."

Balfour criticizes the theory as follows: "Now it may seem at first sight plausible to describe that man as free whose behavior is due to 'himself' alone. But, without quarreling over words, it is, I think, plain that whether it be proper to call him free or not, he at least lacks freedom in the sense in

[15] *Works,* Vol. II, pp. 308–333.

which freedom is necessary in order to constitute responsibility. It is impossible to say of him that he 'ought,' and therefore he 'can,' for at any given moment of his life his next action is by hypothesis strictly determined. This is also true of every previous moment until we get back to that point in his life's history at which he cannot in any intelligible sense of the term be said to have a character at all. Antecedently to this the causes which have produced him are in no special sense connected with his individuality, but form part of the complex of phenomena which make up the world. It is evident, therefore, that every act which he performs may be traced to pre-natal, and possibly to purely material antecedents, and that even if it be true that what he does is the outcome of his character, his character itself is the outcome of causes over which he has not, and cannot by any possibility have, the smallest control. Such a theory destroys responsibility, and leaves our actions the inevitable outcome of external conditions, not less completely than any doctrine of controlling fate, whether materialistic or theological." [16]

The fallacy here resembles that of the strongest motive. That theory ignored the self, and treated the will as a faculty acted on by motives; this theory confounds the character with the man himself. "A person is the sum total of his conscious states so that when the desires and aversions of a man determine his voluntary acts, it is the 'person' who determines them." This identification of the self with the character is not proven, and cannot be. The feeling is invincible that the self forms and possesses the character. It is not something which possesses and dominates him. It is his *habitus,* the clothing of his spirit. In every crisis of a man's life he rises in the freedom of his personality above his character, faces it directly, and passes moral judgment on its springs of action and desire, which he feels present within. It is because a man's spirit can thus transcend and judge his own character that genuine moral and responsible acts become possible and actual.

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[16] *A Criticism of Current Idealistic Theories, Mind,* Oct., 1893.

Aristotle recognized this in his ethical writings: "We are in a certain sense cooperative causes in the formation of our own characters, and it is in consequence of this that we propose to ourselves such and such an aim." [17]

Character is a certain bias, an inner environment of mental and moral tendencies and aversions, partly natural, but largely the result of the individual's free choices and actions oft repeated in his whole past life. Human character is a growth, and in its formation the individual has a certain power of self-government by free-will, subject to the law of conscience, and therefore he is responsible for it. It is true and sadly frequent that men yield to certain temptations, drink or lust or greed or lying, till they gradually become fixed habits, making the men their very slaves. But they were not always so, such men have made and riveted their chains. The reality of the repentance and conversion of just such men shows that they can "rise on stepping-stones of their dead selves to higher things." [18] Character can be modified by new acts, even as it was created by earlier free acts, though such modifications require strong effort. Hence Illingworth furnished us with an admirable definition of character when he said that character is the momentum one gains from past acts of choice, that is, by the past use of freedom.[19]

We do not deny the influence of formed character on the will, we simply deny that the man in each case is shut up to one single line of action within the sphere of his character. There is always more than one possibility open to him. He has ever a choice between a higher and a lower line within the limits of his ordinary habits. But in each case the definite choice and act affects his character, intensifying it for good or bad. Character is not fixed, unalterable, so that only one course is open to a man. Diverse desires connected with the self are always present, though each has its connection with our inner life and represents the man in some degree. Thus

[17] *Nicomachean Ethics*, Bk. III, Chap. 5.
[18] *In Memoriam*, Canto I.
[19] *Personality, Human and Divine*, p. 34.

we say of one act, "It was so like him," and of another, "It was so unlike him," meaning that the one was in harmony with the main current of his aspirations and common life, while the other was not. From this standpoint it appears that the self which chooses and acts is not characterless, but that the character of every man has many sides and aspects, and is ever forming.

There are two elements in the formation of character, one is freedom of choice at each critical moment, and the other is the opportunity which determines what moral possibilities shall be open to a man according to the circumstances in which the man stands. At each crisis two or more ways are presented to him, and he can pursue any one. At the end of his course, he finds himself in a situation compounded and recompounded of opportunity and choice. Both act on each other; opportunities limit choices, and choices develop opportunities. It is like the wind and the helm determining day by day the course of the ship, the one from without and the other from within. But even in the hard moments when the tempest seems to defy the helm and threatens destruction, the captain has a choice; he can let the ship drive ahead, alert to all dangers, or he may lay to and drift, watchful of every lull to regain control.

3. *Heredity determines character*

The determinists take still another step and declare that character itself is largely due to ante-natal influences. This is a necessary corollary of the preceding position, and the logical conclusion of the determinist theories. The germ of character to be developed is the resultant of conditions and actions in the lives of our ancestors and of all the generations before us. To trace the chain farther back would be to carry it into the causality of the whole universe.

This adds the dread element of heredity to the old problem, and only recently has it been studied scientifically. In older thought character was man's own creation, hence his own responsibility. This theory makes character fated and unalterable from the very birth to death. We cannot ignore nor

escape this miasma. It is in the air. Under the influence of physiology, psychology, and evolutional ethics, it hangs like a nightmare over a large portion of modern thought and literature, suggesting doubts and killing hopes, in a way that threatens to make life for many what Thompson describes our age to be in his *City of Dreadful Night*. Through plays, novels, poems, scientific discussions and magazine essays it permeates all classes of minds.

This is the dreariest and most hopeless fatalism, for it roots man's whole inner life as well as his body in the vast cosmic process. The mechanical theory of evolution leaves not a shred of dignity wherewith man can wrap himself and stand upright in self-respect. Pessimism exudes from fatalism like sepia from a cuttle fish. What could be more dispiriting than to doubt the reality of all effort, to deny the possibility of self-conquest and triumph over circumstances, to find heroism an illusion and virtue a dream? What could break the spring of life more completely than to feel that our feet are tangled in a net whose meshes were woven for us by our ancestors, and for them by tailless apes, and for them by gilled amphibians, and for them by amœbæ, and so through all the stages of life.

The strange facts of heredity — inexplicable despite all theories — do not exhaust man's being and therefore cannot be the sole determining factor in his whole existence. They are appalling and conclusive only to those who on other grounds have lost all faith in man's spiritual being. If we look within, we have all the evidence we need that we are neither reflex action machines, played on by cosmic forces, nor curious puppets worked by strings which run back to our far off ancestors. Heredity does present us with moral problems and responsibilities; for amid the influences which act steadily upon a man, one of the most certain and pervasive is the influence of the " dead hand " of those whose flesh and blood he inherits; and in like manner, he may be laying up an inheritance for weal or woe which his children and grandchildren will enter upon in the solidarity of human life.

The sins of the fathers do create limitations on the children's

freedom of action, making certain sins easier or more tempting, because appealing to their inherited temperament, but they do not destroy all freedom, the power to choose the good, though the inherited propensities to certain vices may make the duty harder on that particular side. The inheritance which evil men transmit to their children may form at times an inner environment comparable with the outer environment of wealth or poverty, culture or rudeness, social standing or obscurity; but the inner environment, though a drawback, does not in itself determine the whole life and conduct any more than does the outer environment. Every man is born to struggle with evil within and without as the conditions of ethical growth, and his natural ancestry only determines the peculiar mode and particular field of his individual trial and testing, what kind of sin shall entangle his feet in the race for the goal, whether greed or lust, temper or sloth, ambition or cowardice. But this peculiarity in each case is not fate. The conditions of the battle may be determined in each life, but the man can fight the battle in the strength of his spiritual being, in reliance on God. The stronger his faith in his own manhood as real, the weaker becomes the power of the inner environment to conquer him.

This idea of heredity as determining character is directly opposed to two principles drawn from our study of evolution. The first is that acquired characteristics cannot be inherited. Evidence is accumulating to uphold Weismann's view that only congenital variations are inherited. These may include temperamental tendencies as well as physical characteristics. Thus if moral and spiritual qualities are inherited at all, the field of heredity is enormously reduced by this law of non-transmission of parental acquirements.

In the second place, the great fact in evolution, its motive principle, is variation. Recent evolutionists look upon such variations as starting within the organism in definite lines on a new departure. When humanity appeared, there would be corresponding variations on the inner thought side and the tendency to a new line of action. If any ancestor of mine could inaugurate a new departure from the previous family

type of life or character, why may not I also develop new traits and begin new lines of action? The limitations which beset us, the seemingly enormous influence of heredity and environment on character and will power, are apt to blind us to the fact that there still remains a region of possibilities, of things which are not, but which may be, or which need not have been and yet are. In this field we are literally creators, able to bring into being conditions or facts which without us would not have been. In the aggregate such new departures affect the whole course of human history vitally and indelibly. All civilization depends on this power of change by individual leaders breaking through the barriers of hereditary customs, fixed traditions, and the tyranny of the social order. This advance certainly is not determined by heredity, for it consists in consciously departing from the past.

Heredity accomplishes nothing in the field of history. It is simply the balance sheet of a nation's social and political aptitudes and habits at a given time or period; its inherited capital, embodied in laws and customs. It stands for conservatism, for things established. It does not stand for advance, but stands rather in the way of progress. Forward movement demands initiative, new determinations, new ideals, which certainly do not spring from the past, though they are related to it. The civilizations which blindly followed hereditary influences, like China and India, ceasing to change, ceased to be truly alive. They slept, rather than lived; stagnated, rather than acted.

To be valid against all freedom, the inherited traits must be irresistible. They may limit the sphere of possible activity and modify individual responsibility in some cases, but they no more necessitate fated choices than does the external environment which also conditions our action. In that case the children of corrupt or drunken parents would be hopelessly doomed to ruin, not so much born as damned into the world, as South said. It would be a mercy in such cases to give them quick and easy death, as some logical theorizers actually propose to do. But facts today make against this confident

dogmatism. We are the children of a thousand ancestors, and in our veins runs the intermingled blood of the diverse streams of many lives. While there is much that is good and pure, there are also many rivulets of passion, duplicity, greed and malice, which seem to form a combination that would predestinate us to certain destruction. But it is not so.

The most convincing and hopeful answer to this new Fatalism is the testimony in all countries shown by years of social relief among the criminal classes, that hereditary tendencies can be modified and even eradicated by good training and early change in social environment and home influences. In most cases the children of criminals who have been put in good surroundings have outgrown all moral likeness to their parents. Statistics are given running as high as ninety per cent. of such poor outcasts who are now educated, refined, law-abiding and prosperous citizens. "We can think," wrote Mr. Loring Brace, "of little Five Points thieves who are now ministers of the gospel or honest farmers; vagrants and street children who are men in professional life; and women who as teachers or wives of good citizens are everywhere respected; the children of outcasts or unfortunates whose inherited tendencies have been met by the new environment and who are industrious and decent members of society." Environment has been shown to be a stronger force than heredity.

In concluding this section it must be noted that the practical ignoring of this consideration in lectures delivered and in class books used in our colleges and universities cannot fail in the long run to do harm. Everywhere there is a tendency, and more than a tendency, to explain men's lives and actions by anything rather than their own wills. They are the product of ancestral influences or the creatures of their surroundings, or animals, following always the strongest motive. The one possibility, ruled out regardless of all inner facts, is that they may be real personalities with a decided voice in their own destiny. Such teaching would prove disastrous, if the students really believed it, and at best it may weaken their sense of duty and form an excuse for inaction. Men, young and

old, need to be taught in unmistakable terms that they themselves, and not their inner or outer surroundings, are mainly responsible for their wrong-doing or flabby do-nothingness. The world has grown better in the past, only by the determination of strong men to make themselves better despite ancestry and environment, and to wage steady warfare against inherited traits and tendencies and against the social influences which drag men down. "But all men are not strong." True, but let us not tell the weak that they cannot do any better and are not to blame! We must preach effort and hope, not *laissez faire* and despair. If the fad of academic sociology is to help and not injure the "sociological units," it must seek to educate their wills and to strengthen their sense of individual duty and responsibility.

III. Pantheistic, Theological Denials

This attack on freedom holds that it is inconsistent with absolute unity, because it is irreconcilable with the Divine Will as sovereignty, power, and foreknowledge of all events. All forms of pantheism are opposed to freedom on the ground that it makes man independent of God. The discussion of these denials belongs to works on Christian theology, rather than on fundamental or natural theology. Suffice it to say here that in early Greek theology human freedom was emphasized as a mark of divine likeness. The fatalism of Augustine met with little acceptance in the mediæval Church, and was not held among the mass of Christian people until it became embodied in some of the Reformation teaching. True Christian theology, based on the plain teaching of the whole Bible, recognizes that God voluntarily limited Himself, when He created free spirits. The absence of any time element with God removes from His self-limitation all difficulty as to fore-knowledge.

In the contrast with some theological depreciations of man we might note the striking words of the great evolutionist, Professor Cope: "It is now well to consider how far an automatic mind has any claim to personality or individuality, as generally understood. From the usual standpoint, a being

without 'liberty,' or will, properly so called, is without character, and in so far a nonentity. Even the character of the Deity cannot escape this destructive analysis; for according to Spinoza, if He is good, but a single line of action, without alternatives, lies open to God, if He be at the same time omniscient. All this is changed if the element of spontaneity in character be presupposed. The existence of such a quality in man renders foresight of his decisions no more than a calculation of chances, and in other cases impossible; thus offering the only conceivable limit to omniscience, and hence to omnipotence. As we regard the goodness of God as the anchor of the universe, if that goodness be in some respect inconsistent with omnipotence, we are strengthened, if we discover that there is ground for correcting our traditional suppositions in regard to the latter. Can we not find this ground in a liberty or freedom which is the condition of what we suppose, in the absence of knowledge, to be the characteristic of the highest class of conscious existences?" [20]

It has already been pointed out that Spinoza did not dare to apply his mechanical system to inner thoughts and purposes of the heart, for his very enthusiasm for his high and holy ideals made him transcend his own system. But in doing so he had to give up his whole philosophy. Fatalism has no loopholes. It must control the inmost thoughts as well as the outer actions. Spinoza is utterly illogical when he blames one friend for an action of which he does not approve, or urges another to exert himself to assiduous study for the cultivation of his soul.

Many of the Hegelians join hands with the Empiricists in scornful condemnation of the insane pride which supposes men to be real agents with power to act and to affect the course of nature, like a mob of little gods. But better petty gods than petty puppets, deluded in all high faiths and hopes, whose very creation would be a mockery. The philosophers, who aim at unity at any cost, reject freedom because it separates

[20] *The Origin of the Fittest*, p. 456.

man from God and makes him independent, no matter how slightly, of "The Absolute," and implies a plurality of "causes" which is absolutely inconsistent with philosophic unity. But that, in turn, outrages our moral consciousness with its profound conviction of responsibility and sin.

The best answer to the Hegelians is given by James Seth: "This (Hegelian) unification of consciousness in a single Self is sometimes carried so far that to speak of self-consciousness or mind in the plural is branded as an apostasy from the only true philosophic faith. But any plausibility which this point of view may possess within the realm of pure intellect vanishes at once as soon as we turn to the moral sphere; we are not merely contemplative intellects, we are, above all, agents or doers. It is well, as Hegel does, to insist on the *rational* character of the universe, but to make Thought the exclusive principle is either to fall into a one-sided extreme or to use 'thought' in a non-natural sense. Thought can not fairly be made to include will, and any theory of the universe which neglects the fact of will omits that which seems to communicate a living reality to the whole. . . . It is in the will, in purposive action, and particularly in our moral activity, as Fichte, to my mind, conclusively demonstrated, that we lay hold upon reality. . . . In the purposive 'I will,' each man is real, and is immediately conscious of his own reality. Whatever else may or may not be real, this is real. This is the fundamental belief, around which scepticism may weave its maze of doubts and logical puzzles, but from which it is eventually powerless to dislodge us, because no argument can affect an immediate certainty — a certainty, moreover, on which our whole view of the universe depends. . . . In our wills we feel a principle of self-hood, which separates us even from the Being who is the ground of our existence. This is most manifest in the sphere of moral duty. 'Our wills are ours to make them Thine,' as the poet finely puts it. But they must be really ours, if there is to be any ethical value in the surrender — if there is even to be any meaning in the process at all. If there are not two wills involved, then no relation between them is

possible, and the imaginary duality is an illusion incident to our limited point of view. But the ethical consciousness places its veto once for all upon any such sophistication of its primary and absolute deliverance; and by that absolute deliverance, we shall do well, I think, to stand. The speculative reason sees no alternative between absolute dependence, which would make us merely the pipes upon which the divine musician plays, and absolute independence, which would make the world consist of a plurality of self-subsistent real beings. These are the only kinds of relation which it finds intelligible. But it seems to me that it must be, in the nature of the case, impossible for the finite spirit to understand the mode of its relation to the infinite or absolute Spirit in which it lives. That relation could only be intelligible from the absolute point of view. The fact, then, that we can not reconcile the partial independence and freedom of the finite self with its acknowledged dependence upon God in other respects, need not force us to abandon our primary moral conviction, in deference to a speculative theory which may be applying a finite plumb-line to measure the resources of the infinite. After all, why should the creation of beings with a real, though partial freedom and independence be *an absolute impossibility?* It is certainly the only view which makes the world a real place — which makes the whole labor of history more than a shadowy fight or aimless phantasmagoria." [21]

In conclusion let it be said, as has been many times in this work, that if the speculative intellect is thus powerless to help, and serves only to perplex us with sophistries, we must fall back on those deep convictions of the heart which are more certain and conclusive to him who feels them than the logical arguments of the head. Our moral destiny seems left in our own hands. In ethical as in religious life we must walk by faith not by sight, "believing where we cannot prove." One power remains. We can take sides with the Right, and will to believe all that makes for the high and holy in life and thought,

[21] *Two Lectures on Theism,* pp. 45–48.

and reject the mechanical theories which degrade or deny our manhood. We can act as free men, willing and working for the good to which conscience witnesses, and as we do thus set our hearts on the things that make for peace and faith, they become certain realities to us, inspiring and uplifting. The very effort this decision forces us to make against the lower elements of denial — the appetites of the body, the impulses of the senses and the appearance of mechanism in the world — will make us stronger men in will and character, and our faith in freedom will grow settled and unquestioning. A good will — a will set to obey God's commandments — is the only truly good thing in the universe. Hence we understand the maxim: "Freedom of will is something to be acquired, not given outright." This freedom is the harmony of our own will with the Supreme Will, and when it has been attained we know that "God's service is perfect freedom."

CHAPTER XIX

DENIALS OF CONSCIENCE

Conscience as the intuition of Eternal Righteousness, has been denied along two lines:

I. Social or Utilitarian Ethics

This is the view that this world and its experience is the sole source and field of conscience. Utility, the merely present good for oneself and others, is the sufficient basis and rule of Ethics. This is the theory expounded by Bentham, Mill, Grote, and others. For a discussion of it the reader is referred to any good history of ethics, especially H. Sidgwick's and to the well known first chapter of Lecky's *History of European Morals,* written from the intuitive standpoint.

II. Evolutional Ethics

This theory combines intuitive and utilitarian elements. Our intuitions of right and wrong are a set of the brain in favor of certain kinds of action, inherited from race experiences of pleasure and of pain, animal as well as human. They are *a priori* to the individual but *a posteriori* to the race.

C. M. Williams begins his important *Review of Evolutional Ethics* by remarking on the astonishing rapidity with which the theory of evolution has been accepted, not only in natural history but in every department of science, and not least in ethics, as a guiding principle in all study. "Every year, and almost every month, brings with it a fresh supply of books, pamphlets and magazine articles on 'The Evolution of Morality,' 'L' Evolution de la Morale,' 'Die Evolution der Sittlichkeit,' 'Sittlichkeit und Darwinismus.' So many are the waters which now pour themselves into this common stream, that the cur-

rent threatens soon to become too deep and swift for any but the most expert swimmers." [1] Though outlined in Chapter IV of the *Descent of Man,* naturalistic ethics owes its present vogue more to Herbert Spencer than to Darwin. Williams outlines the systems of ten other leading writers, English and Continental, and the magazine writers and college professors who take its premises for granted are too numerous for mention. Its apparent simplicity commends it to the popular mind. Ignoring all "metaphysical illusions" as to any superhuman element in conscience, it claims to furnish evidence of the origin in animal life through a continuous evolution, not only of bodily structure, but of the moral and spiritual faculties of man. The moral sense is only a highly differentiated form of social instinct of gregarious animals. The conscience is a complex of associated social impulses and feelings, which ultimately are traceable to innumerable sense-impressions in primeval animal relations, oft repeated, till they have become mental habits, and at last emerged in human consciousness as moral intuitions. The sense of duty, of obligation to a certain course of action, is simply a prudential regard for social opinion and personal advantage, which seems mysterious and sacred merely because we feel it is "a power not ourselves," no product of our personal experience or will, and we know not its real origin. Beginning in social interrelations, it grows more complex with advancing civilization, and varies accordingly, but it can never rise above its source into any transcendental sphere. In morals, as in science, the one law of study and rule of action is the observation of commonplace "facts." Ethical facts have, indeed, their own peculiar environment in consciousness, but they are determined as definitely and invariably by their antecedents as the phenomena of the physical order. As Dr. Brinton bluntly puts it in his work on early religions, "We can scarcely escape a painful shock to discover that we are bound by such adamantine chains. As the primitive man could not control the processes of nature, so are we slow to

[1] p. 2.

acknowledge that others, not less rigid, rule our thoughts and fancies." [2]

In this, as in all other controversies with men of science, we differ not so much as to observed facts — we reverently accept all proven facts as parts of God's own revelation of his method of working in the past and the present — but as to the principle by which we correlate and interpret the isolated phenomena. Shall we study them solely in the light of mechanical forces acting in or on matter, and of our observation of animal instincts and habits? Or shall we use for our guide the light of that rational consciousness which alone enables us to observe and reason about natural facts, as certainly brutes do not? Why should we not interpret ethical facts, at every stage, under the illumination of the inner environment of our personality and consciousness of moral obligation? The contrast appears clearly in the two phrases, " The Ethics of Evolution," and " The Evolution of Ethics." The first looks on ethical life as merely a stage or episode in the continuous process of evolution, which brings forth in succession a multiplicity of heterogeneous phenomena out of an original homogeneity, as Spencer expresses it, by the simple principle of segregation of parts and the differentiation of function. The Evolution of Ethics, on the other hand, admits that ethical life, having once appeared from a higher source than the phenomenal world, was developed or evolved under the progressive advance of social relations and moral civilization. That is obvious. *Ultus homo nullus homo,* is especially true of the ethical *homo.* Moral relations cannot exist apart from social relations — but that is a different thing from saying that ethical being itself is the creation of society.

Evolution itself creates nothing. It is merely a process of change or growth in a preexisting something which is the subject of the modification or development. In the beginning the Divine Sower went forth to sow, and the seeds sown, having life in themselves, develop in due order, according to their

[2] *Primitive Religions,* p. 8.

time and their "soil"; but never apart from His presence or without His knowledge. We may admit the evolution of conscience in the sense in which alone theists can accept the evolution of physical life. Just as the immanent formative principle, the archetypal energy, built up each organism according to its kind, through successive forms, till the divine idea is realized in the final type, so the spiritual energy, the moral archetype of conscience, precedes and dominates its own evolution, however slow the process and untractable the material. The ethical differs in one vital point from the physical development. Man has no control over the material environment, an ever-present factor in evolution, but the social environment is itself the creation or expression of humanity. The ethical ideas and judgments, manners and customs of any age are the product, not of external influences, of food and climate, but of spiritual forces, the interaction of human wills and personalities. In a word, conscience has its life in itself. Spontaneous generation of moral ideas out of non-moral animal existence is no more possible than the genesis of physical life out of inorganic matter. The advocates of unbroken continuity in the evolutional process, one thing after another arising out of the preceding very different things, do not seem to realize the difficulties and assumptions involved in their view. It has never been more clearly put than in Spencer's letter to Mill, first published in Bain's *Mental and Moral Science*. "I believe that the experiences of utility organized and consolidated through all past generations of the human race, have been producing corresponding nervous modifications, which by continued transmission and accumulation, have become in us certain faculties of moral intuition — certain emotions corresponding to right and wrong conduct, which have no apparent basis in the individual experiences of utility."[3] The strength of this apparently simple explanation consists in its reconciliation of the intuitive and utilitarian theories of morals which, till it appeared, struggled for the mastery in the field of ethical

[3] p. 722.

science. It agrees with Butler and Kant, who looked on the "categorical imperative" of duty as something transcendental — a voice within, not an impulse from without — and also with Mill and Bentham, who explained conscience by the law of the association of ideas, determined in this case by agreeable or disagreeable social experiences. The latter were nearer the evolutional conception than the former, only they did not carry their "experience" far enough back, wrongly supposing the individual life sufficient for the genesis and growth of the moral sense anew in each generation. The foundation stone of this whole system is plainly the assumption that sensations of social pleasure and pain in earlier animal life, necessarily fleeting and varying, were capable of producing such impressions on the "brain tracts" concerned, that they were transmitted to later generations in the form of intuitive moral impulses apart from similar "sensations." Darwin, in his *Origin of Species*, admitted that the difficulties connected with animal instincts "would probably appear to the reader sufficient to overthrow the whole theory." [4]

But Spencer shows no such diffidence about his view of the easy transmutation of animal sensations into human intuitions. What evidence can we possibly have of the nervous modifications alleged to be produced by social experiences or of their transmission, not only as "inherited habits" of action, but as inner intuitions apart from any action? Even if we start with rudimentary human society, which, strictly taken, the theory does not permit us to do, there is no evidence that the commonly feeble feelings of self-approval or self-reproach in social relations, so deeply impress the nervous organization, that they can be handed down to descendants. This easy assumption of an interrelation between mental and physical processes, so intimate that ethical feelings leave traces of themselves on brain structure, meets with no support whatever from the representatives of the physical psychology. Wundt and Münsterberg, Clifford and Huxley, Hodgson and Spalding, Titchener

[4] See Note K.

and Scripture, all work on the hypothesis of the entire independence of the "parallel" streams of psychical and physical action. Consciousness is only the passive, subjective side of certain nerve movements, not itself an active factor in the work.[5] Whether or not the material process "causes" the psychical, they are all agreed that psychical states cannot possibly affect the course of the nervous "shocks" and motions, not even in the case of volitions where we feel most conscious of self-determination. "If my will," says Lange, the historian of Materialism, "can deflect a single atom a millionth of a millimeter out of its path as determined by the laws of mechanics, the scientific formula of the Universe would become inexplicable." Professor Huxley later took back his early admission that "Our volition counts for something as a condition in the course of events," adding in a note, "To speak more accurately, the physical state of which volition is the expression." [6]

I am not aware that Spencer has noticed this objection, but he has vigorously contested the view of Weismann that acquired characteristics — *i.e.*, bodily modifications or mental habits arising after birth — are not transmitted by heredity. This manifestly cuts the ground from under both the Darwinian theory that instincts are inherited habits, which begin in "chance" actions, and the Neo-Lamarckian view of the inheritance of organs modified by use or disuse. The evolutionists of the old school claim that Weismann has made many concessions under their criticisms, but it is certain that he has not modified his original strong assertions to the extent of admitting the inheritability of nervous modifications due, *ex hypothese,* to mere emotions. If not, Spencer's theory is left altogether in the air.

The objections to it on the psychical side are equally obvious and cogent. Evolutional Ethics have been well defined as the Natural History of Morals, and therefore must fail, if it appears that in the nature of things there can be no Ethics

[5] See pp. 225–8.
[6] *Methods and Results,* p. 163.

in natural history. It will be objected that this is a matter of definition, but the material for the definition is part of the common consciousness. All men, barring philosophers of a certain school, look on the sense of duty and of responsibility as the essential element in ethical life. Both imply an underlying conviction of personality and moral freedom, and none of these ideas or feelings are conceivably present in the animal consciousness. No one has stated more forcibly than Professor Cope, the greatest American evolutionist, the fact that the ethical consciousness depends on the sense of freedom, with which Kant also connected it, and therefore that not even the rudiments of morality, properly so-called, can be found in animal existence.

This difficulty is evaded by writers like Littré and Carneri, and, unfortunately, also by Professor Drummond (following John Fiske), by identifying the moral altogether with the social consciousness, and assuming that the altruistic impulses connected with sexuality, gregarious habits, and the slowly developing family life, somehow issued in the higher ethics of the truly human life. Here we have the fallacy, so often recurring in this whole field, of supposing that we can get rid of essential differences or new departures, by the simple device of imagining their beginnings to be "imperceptible," and then allowing time enough for them to develop into very perceptible differences — a mode of argument which shows that the study of external nature does not always develop the logical faculties. The instincts of propagation and self-preservation, and even of the care of the young, are mere organic impulses in animals. They furnish material for morality when once it has appeared, but they have in themselves no moral character, because unaccompanied by any sense of duty or of freedom. If once we begin this fantastic search for the rudiments of ethics in nature, there is no logical reason why we should begin with the animal world. We may see mind in plant life, find loves and hates in chemical affinities and repulsions, as Haeckel does, and rejoice, with Drummond, to behold the beginning of self-sacrifice in the division by fission of proto-

plasmic cells. It is refreshing amid this confusion of words and ideas to read Professor Huxley's blunt repudiation of this easy identification, in all essential rudiments, of animal and human life. He uses the strong expression that "there was a stage when, if I may speak figuratively, the *Welt-geist* repented him that he had made mankind no better than the brutes and resolved upon a largely new departure." Then truly human life began in man's struggle against the cosmic process, and in his rising above nature's law that might makes right. In his Romanes Lecture on *Ethics and Evolution,* he writes, "The practice of that which is ethically best — what we call goodness or virtue — involves a course of conduct which, in all respects, is opposed to that which leads to success in the cosmic struggle for existence. In place of ruthless self-assertion it demands self-restraint; in place of thrusting aside or treading down all competitors, it requires that the individual shall not merely respect, but shall help his fellows; its influence is directed, not so much to the survival of the fittest, as to the fitting of as many as possible to survive. It repudiates the gladiatorial theory of existence."[7] We welcome his indignant protest against the cold-blooded theorists who covertly advocate imitation of nature's rough-and-ready method of maintaining a strong species — or healthy state — by eliminating pitilessly the unfit to live, sickly infants and hopeless invalids, idiots and paupers, the feeble through age, the whole herd of incapables. What holds back the butcher's hand? Why not cry with shark and tiger, and the conquering hordes of Attila and Zenghis Khan, *Vae victis?* Why should not the minority suffer for the good of the majority, if, indeed, we aim only at "the greatest happiness of the greatest number"? It is impossible to answer these questions without bringing in considerations fatal to the first principles of evolutional ethics, for if man be simply the product of nature, he should be well content to live by nature's own law that might is right. Why should he feel strange self-reproach when he walks in the footsteps of his

[7] Pp. 81, 2.

brute ancestors and cruelly shoves aside and kills off those who stand in the way of his pleasure? Why does the helpless effect protest against its equally helpless cause, both being mere parts in a mechanical process? Why do the children of nature sternly judge their mother and repudiate her methods with horror, such as fired the denunciations of John Stuart Mill?

All unconscious of its profound significance in the coming days of evolution theories, our fathers rightly gave the name "humanity" to all impulses and acts which spring from pity, sympathy, and loving-kindness. They are truly human, not to be developed out of brute instincts by any juggling with words. There is great need of clearness on this point. The question is not whether "altruistic" actions — we cannot speak of motives — appear here and there in the animal world, but whether, when they do appear, they prove so immediately profitable to the beast which does them as to give it an advantage in the struggle for life, and to be handed down to its young, through nervous modifications. Others may let their imaginations run riot in picturing the beginnings of compassion in the dim æons when "dragons tore each other in their slime" and dream idyls of the evolution of the father and mother out of the lair of the tiger and the leafy home of the monkey. We content ourselves with the narrower horizon of human history and ask the question, when and where we can find the Golden Age when Love smiled and Justice reigned among men; when loving-kindness "paid" in immediate pleasure and personal profit; when prophets and saints, the doers of good and the ministers of mercy, found such satisfaction and honor in their life, that they and those who saw how they profited, acquired that "set of the brain" toward gentleness and self-denial which we call humanity? The very question seems a cynical satire on the world as it is. We know that, through the ages, Christ's way of love is not the way of personal happiness and profit. As life goes on, we learn the sad truth that the happy are not the good and the good are not the happy, though we never doubt they ought to be one and *will be* in God's own time. All

history witnesses "Truth forever on the scaffold, Wrong forever on the throne," yet we never lose our faith that

> "The scaffold sways the Future and behind the dim Unknown,
> Standeth God within the shadow, keeping watch above his own." [8]

Fiat justitia, pereat mundus, said the Roman of old, and the modern thinker carries it backward to the world beginning, and voices the undying faith of the heart in the eternal nature of righteousness. It is not necessary that any world exist, but it is necessary that justice be done and ultimately triumph in any world that does exist.

Had Darwin only studied the inner world of human character and motive, as well as the animal life of sensation and instinct (which with his characteristic honesty, he admits he did not do [9]), he and others would have perceived the fallacy which underlies and vitiates the whole theory of the purely animal origin of conscience. It assumes that the altruistic impulses, sympathy, benevolence, generosity and justice, arose by easy stages from the primitive instincts of self-advantage and self-preservation, and became everywhere the stronger and more enduring, as soon as animals became gregarious. But even granting that social impulses were strong in the prehistoric brute man, he would still be in the egotistic stage so long as they were purely self-regarding, merely the prudent avoidance of bites and scratches from his mates whose convenience he interfered with. How could such a non-moral animal rise into the truly ethical life of duty? Darwin's only connecting link is remorse, self-reproach (enforced by outer disagreeable consequences) for having followed his selfish and not social impulses. But why should an intelligent brute — all the crea-

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[8] Lowell, *The Present Crisis.*

[9] To Charles Lyell, he wrote, "I have thought only vaguely as to man. I have done scarcely anything in psychology." To J. Galton, "I have never tried looking into my own mind. I have never systematically thought on religion in relation to science, or on morals in relation to society." Miss Cobbe remarks, "Mr. Darwin told me that he had never read Kant, and accepted with reluctance the loan I pressed on him of Semple's translation of the 'Metaphysic of Ethics.' He returned it in a few days, after, I believe, a cursory inspection."

ture is at this stage — feel any ethical self-reproach for yielding to the imperious demands of his animal nature, psychical or physical? Only on the supposition, unconsciously taken for granted, that he and his fellows already recognize, however dimly, the supremacy of the conscience, the *ought,* over every other principle of human action. But obviously then, he is not a brute in the process of becoming a moral agent, but already a true man, with an intuitive feeling of the obligation of Right, apart from any considerations of gain or loss. Only a self-conscious moral agent in an ethical environment, however rudimentary, could feel true remorse, the shame of wrong-doing, not the mere fear of penalty, which the theory, by an obvious fallacy of inversion, makes the source of the very conscience which it presupposes.

We may, therefore, claim the evidence of historical and human, as opposed to hypothetical and animal, experience, for the old faith, that conscience is a voice from a higher environment, and has its birth in the spiritual and the divine, not the psychical and social realms of being. The undying hopes, the abiding convictions, the soaring aspirations, "the truths which wake to perish never" — these are the mystic *instincts* of man's higher nature, no more imagined by him or evolved out of experience than are the physical instincts of the lower nature he shares with the brutes. Science affirms that these last, in each and every case, correspond to a material world without. Why should not faith hold with equal reason that the intuitions of the soul are as true and reliable in their intimation of a world eternal, an environment of Spirit?

> "For Nature, giving instincts, never failed
> To give the ends they point to."

Ethical Science need not start with the idea of God, but it must end with it, if we look beneath the surface and question the depths of our being. Duty finds its initial principle in conscience, and no conception of conscience is so simple — and profound — as that which lies in its etymology. It is *conscientia, συνείδησις, joint-knowledge* not only of man with

men, but still more of man with God, the finite spirit's dim but real consciousness of the root of its Being in the Infinite Spirit and its obligation to live by the law of His life. Personality is ethical in its very essence. God is not power nor knowledge, but God is love, and all spiritual existences are made in His image, and tend to His likeness. They approve the Law as holy, just and good, even, when in self-willed rebellion, they dare to violate it. It is this fact, that duty is the realization of our highest self, which glorifies obedience to the voice within, into a willing cooperation with the eternal order, and makes the service of God perfect freedom. Wherever conscience is found, and it is found wherever men exist, it is never associated primarily with human relationships, but with a higher and divine order. The unsophisticated heart, awed by dim visions of perfect righteousness and conscious of its own wilful sin, ever believes that all holy desires, all good counsels, all just works proceed from God. Even the Greeks rose above the philosophers' idea of purely social ethics and civic righteousness. Plato thinks that men are good "by a certain inspiration of the gods." Antigone makes her pathetic appeal from the conventional rules which thwarted her sisterly love to "The unwritten and enduring laws of God." [10]

The ultimate test of any philosophical or social hypothesis is whether it will work, whether it fits into the actual order of things. It cannot be too often emphasized that this new view of the purely animal origin of ethical sentiments and of duty as merely the self-regarding social instinct, somehow evolved into an "intuition," has never been put to the test of consistent practice. The theorists of the study and lecture hall shrink back from the *enfants terribles,* the educated nihilists of Russia and France, who take them at their word, and, looking on themselves and their fellows as simply highly intelligent animals, propose to live by brute law. Even M. Taine, the lucid teacher of scientific Positivism, did not dare teach his children on the lines of his own philosophy, but had them in-

[10] See p. 436.

structed in moral duty by a Protestant pastor whom he esteemed. There is a tacit agreement in certain quarters to keep ethical theories and ethical practice apart, but the day has past, for esoteric teaching, and philosophic, no less than scientific, ideas filter down from college halls and laboratories and Twentieth Century Clubs into the common mind as never before, and what is whispered in the closet will be preached on the housetop.

I do not deny the noble character of much of the ethical teaching, on its social side, of many writers of the New School. It is true that they agree in material points with the intuitive moralists, in the exposition of practical duties. Herbert Spencer's *Justice* is a helpful book so long as we read it apart from the theory of the animal origin of conscience in the *Data of Ethics*. But the practical question is, can we permanently thus divorce theory and practice? Will the conduct commended in the later work continue to seem reasonable and "our duty" if the principles of the earlier ever really prevail?

We are confidently assured that people are utterly weary of speculation and abhor metaphysics. "They care nothing about origins and crave only facts." It is true that heretofore they have not philosophized because they had no need. They were all unconscious "ontologists," acting on philosophical principles, just as M. Jourdain talked prose without knowing its name. But what if we force them to think by denying the very foundation of the settled habits and beliefs heretofore taken for granted? True civilization is moral and spiritual, not economic and materialistic; the slow creation or expression of lofty ideas of God and man as spiritual personalities, intimately related. Will the "practical" superstructure of prudential, social morality abide firm, if the "transcendental" postulates of the highest ethics be scornfully swept into the limbo of obsolete superstitions? Individual thinkers, protected by their home training and social environment, may live good lives while denying any spiritual ground whatever for goodness. Jean Marie Guyau, a faithful son and husband, may write of *Morality Without Obligation or Sanction* as safe and

sufficient for all, but we need not look beyond France herself, to see that common men cannot maintain themselves without conscience, even on the lower plane of purely worldly honor. Balfour touched the quick of this vital problem (which explains the bitterness of many of his critics) when he raised the question, whether any truly ethical ideas would or could survive the saturation of the popular mind with the avowed principles of evolutional morals and physiological psychology. His two propositions seem incontrovertible, that no moral code can be effective which does not inspire emotions of reverence, and that such exalted feelings are dependent on the origin from which those, who accept such a code, suppose it to emanate. In melancholy words, reminding us of the somber majesty of *Thanatopsis,* he pictures man as "pure science," conceives him naked and unadorned by the faiths and fancies of dreamland, and asks whether such a race "can any longer satisfy aspirations and emotions nourished upon beliefs in the Everlasting and the Divine." "Man, so far as natural science by itself is able to teach us, is no longer the final cause of the universe, the Heaven-descended heir of all the ages. His very existence is an accident, his story a brief and transitory episode in the life of one of the meanest of the planets. Of the combination of causes which first converted a dead organic compound into the living progenitors of humanity, science, indeed, as yet knows nothing. It is enough that from such beginnings famine, disease, and mutual slaughter, fit nurses of the future lords of creation, have gradually evolved, after infinite travail, a race with conscience enough to feel that it is vile, and intelligence enough to know that it is insignificant. We survey the past, and see that its history is of blood and tears, of helpless blundering, of wild revolt, of stupid acquiescence, of empty aspirations. We sound the future, and learn that after a period, long compared with the individual life, but short indeed compared with the divisions of time open to our investigation, the energies of our system will decay, the glory of the sun will be dimmed, the earth, tideless and inert, will no longer tolerate the race which has for the moment disturbed its solitude. Man

will go down into the pit, and all his thoughts will perish. The uneasy consciousness, which in this obscure corner has but for a brief space broken the contented silence of the universe, will be at rest. Matter will know itself no longer. 'Imperishable monuments' and 'immortal deeds,' death itself, and love stronger than death, will be as though they never had been. Nor will anything that *is,* be better or be worse for all that the labor, genius, devotion, and suffering of man have striven through countless generations to effect." [11]

It is utterly beside the mark to declare in reply that men should do the right for the right's sake alone, without any thought of obligation to God or of "pay" hereafter. The question is whether under such conditions there will long be any idea of right in any sense higher than prudent egotism. "Society will survive all wreck of creed." True, but what kind of society will it be that does survive? All men are inspired and molded by their ideals, but out of what shall the ideals themselves be molded, when ancient faith in God and noble thoughts of man have vanished, like childhood's dreams, from off the earth? "Self-made men worship their maker," and self-evolved brutes, when they know the naked truth, will worship the animal and intellectual self — the highest existence in the Universe — and serve it with heart and mind. On what logical grounds can we condemn them? Why should not short-lived creatures of earth live earthly lives? The age needs sorely the warning of the aged Tennyson — may it be heeded!

"Gone for ever! Ever? No — for since our dying race began
'Ever, ever and forever' was the leading light of Man.
Those who in barbarian burials killed the slave and slew the wife
Felt within themselves the sacred passion of the second life.

. . . . . .

'Truth for truth, and good for good!' The Good, the True, the Pure, the Just; —
Take the charm 'Forever' from them, and they crumble into dust." [12]

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[11] *Foundations of Belief,* pp. 30–32.
[12] *Locksley Hall, Sixty Years After.*

CHAPTER XX

DENIALS OF ONTOLOGY. AGNOSTICISM

The subject of Agnosticism is unwelcome to the common mind, but it must be pondered by the Christian student. Theoretic atheism is rare today, but practical atheism, the banishing of the thought of God from common life and the neglect of prayer and worship on the specious plea that our minds are too limited in their very nature to know God at all, this vague, elusive doubt is in the very air, a deadly taint fatal to faith in the thoughtful and thoughtless alike. The agnostics speak humbly enough, insisting that they do not deny the awful mystery of the Infinite Power; they only wish to exalt it to a rightful place far beyond our petty ideas — so far indeed that it fades away from the mind, like a dream when one awakens.

It is not a new mode of thought, but is as old as the Sophists of Greece. It never found more concentrated expression than in Spinoza's saying, that there is as much or as little resemblance between man's idea of God and Deity, as there is between a dog on earth and the constellation Canis Major in the heavens.

The subject of Agnosticism falls naturally into three divisions, Nescience, Scientific Agnosticism, and Ethical Agnosticism.

Nescience, the Relativity of Knowledge

This form of agnosticism may be stated as holding that our knowledge is limited to phenomena and conditioned by our faculties. The mind is an active, organizing principle, which works up the raw material of sensation into clear knowledge, according to its own categories of thought. But we cannot pass beyond this knowledge; we can know things only as they

appear to the senses and are related to each other by the mind. Noumena, things in themselves, back of appearances, are absolutely unknowable.

Kant is the greatest exponent of this view, holding as he did that the three great ideas of the Reason, the self, the world, and God are mere relative, regulative principles. As there are no physical objects congruous to these ideas, we cannot know them as they are. Though they are the points about which all knowledge and thought center and are the most certain of all experiences, yet they are only laws of the mind's working.

The expression of his nescience is found in his *Critique of Pure Reason,* but it should be read in connection with his *Critique of Practical Reason.* In the classical passage in the *Critique of Pure Reason,* he writes: "We have now not only traversed the region of the pure understanding, and carefully surveyed every part of it, but we have also measured it, and assigned to everything therein its proper place. But this land is an island, and inclosed by nature herself within unchangeable limits. It is the land of truth, surrounded by a wide and stormy ocean, the region of illusion, where many a fog-bank, many an iceberg, seems to the mariner, on his voyage of discovery, a new country, and while constantly deluding him with vain hopes, engages him in dangerous adventures, from which he never can desist, and yet which he never can bring to a termination." [1]

But it should always be remembered that Kant qualified his strong statements of the impotence of Reason alone in such great matters by maintaining that, "We enter on the path of pure speculation only in vain. But we have reason to expect that in the only other way open to us, the path of Practical Reason, we may meet with better success."

Agnosticism scorns metaphysics, but it lands us in contradictions as puzzling as Hegel's law of the identity of opposites. Ultimately we are forbidden to know anything as it really is, because in becoming known to us things are transformed into

[1] *Transc. Logic.* Div. I, Bk. 2, Chap. 3. Meikeljohn's translation.

something else under the laws of relativity. Thus we never arrive at the real knowledge of objects. The whole position is false. We pursue a phantom of our own making which dissolves into absurdity as soon as we realize the meaning of the solemn assertion that the very nature of knowledge forbids the possibility of knowledge.

Sir William Hamilton in his *Philosophy of the Unconditioned* held the self-evident existence of the world, of the self, and of God on the immediate affirmation of consciousness. He thus advanced beyond Kant's sceptical position, that the regulative ideas of the reason cannot guarantee their objective validity, *i.e.,* the existence of any corresponding reality outside of thought. But he took away with one hand what he gave with the other! It affords no spiritual help to be assured that the great postulates have most certainly existence outside our minds, if we are straightway informed that they exist beyond reach of our thought. Although self-evident, they remain in themselves incomprehensible, can never be the objects of clear knowledge, because *definitio est negatio,* and to know is to condition. This follows, it is argued, from the fact that words descriptive of God, such as infinite and absolute, express purely negative ideas, and deny the possibility of any clear thought of the abstractions for which they stand. Hamilton carried his doubt of revelation to the extreme of saying that the height of reverence would be to erect an altar to the Unknown God.

This line of thought starts from the proposition that "The Infinite" or "The Unconditioned" means something in its own nature inconceivable, the negation of thought. This conclusion is reached by an apparently simple line of argument: (1) The Infinite is that which has no limits. But everything man knows has limits. Therefore man cannot know the Infinite. (2) Consciousness implies a distinction between two things. To be conscious is to be conscious of some object, and that object is known by being distinct from all other objects by certain qualities which are limitations. Affirm one quality and you deny the opposite. If we say this object is a ball, we

deny that it is a cube or a cone. (3) The Infinite cannot be distinguished from finite things by any lack of the qualities which finite things have, for then the Infinite would have defects and be finite. (4) The Infinite cannot be distinguished by the possession of qualities which finite things do not have, for such qualities would be infinite, and being infinite we could not know them. (5) An object of thought is always one thing out of a number of other things, to which it is related in definite ways. The Infinite embraces all things and we cannot contrast it with other things. To speak of a consciousness of the Infinite is to affirm a contradiction in terms, for consciousness means knowledge of distinction and relations. The Absolute exists out of all relations because it embraces all qualities and includes all thinking beings. Hence it cannot be known in any mode or degree.

Schleiermacher and Ritschl in Germany, and Mansel in England, in his Bampton Lectures of 1858, applied this philosophy to Christian Theology with disastrous effect. Mansel showed his lack of humor and his Christian followers their lack of logical consistency, when he taught that out of this inconceivable something — equivalent, in our minds, to blank nothing, which we cannot think or call a Creator, or good or loving — there has come an infallible Revelation, which is certified not by the witness of our own spirit, but by the miracles it narrates and the prophecies it contains, as if both did not imply a living God. But we are warned that even the Bible does not tell us what God really is, but only how He wills us to think of Him. Ideas and images, which do not represent God as He is, may yet represent Him as it is our duty to regard Him. They are not in themselves true, but we must nevertheless believe and act as if they were true. A finite mind can form no conception of an Infinite Being which shall be speculatively true, for it must represent the infinite under finite forms, but yet a conception which is speculatively untrue may be regulatively true. A regulative truth is designed not to satisfy our reason, but to guide our practice, not to tell us what God is, but how He wills us to think of Him. Even the moral law is regulative only.

"Ethical ideas are not by any means the eternal truth itself, but merely laws which God has revealed, economically, with reference to our human nature without being Himself bound by them. . . . God has the right to suspend occasionally the moral laws, not less than the laws of nature, without canceling their validity in ordinary life." [2]

It was this arbitrary and mechanical conception of God which led to the memorable protest of J. S. Mill, the sceptic, against the teaching of the theologian, on the ground of that inner witness, to which St. Paul made his appeal, commending himself to every man's consciousness by manifestation of the Truth: "If, instead of the 'glad tidings' that there exists a Being in whom all the excellences which the highest human mind can conceive, exist in a degree inconceivable to us, I am informed that the world is ruled by a being whose attributes are infinite, but what they are we cannot learn, nor what are the principles of his government, except that 'the highest human morality which we are capable of conceiving' does not sanction them; convince me of it, and I will bear my fate as I may. But when I am told that I must believe this, and at the same time call this being by the names which express and affirm the highest human morality, I say in plain terms that I will not. Whatever power such a being may have over me, there is one thing which he shall not do: he shall not compel me to worship him. I will call no being good, who is not what I mean when I apply that epithet to my fellow-creatures; and if such a being can sentence me to hell for not so calling him, to hell I will go." [3]

As will be stated more at length in the next section the fallacy lies in treating pure abstractions—"the Infinite" and "the Absolute"—as having being in themselves. The words are not negative but intensely positive. For example, infinite space or time means space or time without limit, but the idea of each remains the same; it is not sublimated into inconceiv-

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[2] *Letter of Mansel to Rev. L. T. Bernays.*

[3] *Examination of Sir William Hamilton's Philosophy,* Vol. I, pp. 130, 1.

ability. Infinity of quality, which alone belongs to the Divine Personality, is equivalent to perfection or the absence of any limitations on the nature or action of the quality in question.

Scientific Agnosticism

This is the most seductive form of spiritual doubt. It is the direct result of the scientific trend of educated and uneducated thought alike. The mind, like the hand, is subdued to what it works in, and steady investigations conducted for years on purely materialistic principles with the mind itself, the living power which does the work, ignored, a paralysis of thought must follow on its higher human side, as well as on the side of faith. Agnosticism, whether serious or flippant, is only the expression on the thought side of a paralysis of faith already accomplished.

Darwin admits this fully: "Disbelief crept over me at a very slow rate but was at last complete." Its completion appears in the pathetic words: "Then arises the doubt, Can the mind of man, which has, as I fully believe, been developed from a mind as low as that possessed by the lowest animal, be trusted when it draws such grand conclusions?"[4] How true is the saying of Pascal, "It is dangerous to make man see too clearly how nearly equal he is to the brutes, without showing him his greatness."[5]

Here we see the fallacy underlying the mechanical evolution view, that we must hark back to the beginning of each thing, even man, in order to understand it. What matters if the far-off ancestor of my body was a brute, if at the end of the ordained development I emerge a man? The vital question is not, what we are developed from, though it be a germ cell, indistinguishable from that of a worm, but what is the divine plan that implanted in that germ its law of growth? The deep words of the Psalmist, "A body thou hast prepared me," are as true of the age-long growth of the body in the great womb of nature, as of the months long development in the mother.

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[4] *Life and Letters,* Vol. I, p. 282.
[5] *Thoughts,* XI.

How can we meet this darkest doubt? When God seems to have vanished from the heavens and the earth, man shrinks from being but little less than God to being but little more than an ape. It is not the master minds in the great world of science, the men of broad culture and wide outlook and healthy interest in the world's great life, but the multitude of faithful specialists in narrow fields, who must be awakened to the half-forgotten truth, that the proper study of mankind is man. It was only when John Fiske ceased to be the devotee of science and became the student of history, that the greatness of man, the person, the thinker, and the doer, dawned on him and he wrote *The Destiny of Man* and *The Idea of God.* It is the studies which recognize and honor man in the wide sweep of his thought, and in the complexity of his being, and the marvels of his creations in the world of mind and of things, which make us feel that our knowledge of the world, and of God depends in the end on our insight into man's own nature.

Herbert Spencer [6] stands out prominently as the philosopher of science, but he advocates also certain constructive principles which make for faith. He differs from the Positivism of Comte, who forbids any thought or speech of the Infinite, as an idea belonging to the outgrown theological stage of human culture, by affirming its certain existence, and holds that we cannot escape the thought of it. As he says, Comte's agnosticism goes too far. It expresses our confessed inability to know or conceive the nature of the Infinite Power manifested through phenomena, but it fails to indicate our confessed ability to recognize the existence of that power as of all facts the most certain. In *First Principles* he agrees with Hamilton and Mansel in looking on our profound consciousness of Infinite Reality, which rests on intuitive feeling, as more certain than any knowledge of phenomena known through the senses. It is *noumenon,* immediate knowledge. Here Spencer writes as an ontologist, but he rejects the ontological interpretation of the words Infinite and Absolute.

[6] On Spencer's methods see Note Z.

"The *absolute* is conceived merely by the negation of conceivability," writes Sir William Hamilton. "The *Absolute* and *Infinite,*" says Mansel, "are thus, like the *Inconceivable* and the *Imperceptible,* names indicating not an object of thought or of consciousness at all, but the mere absence of the conditions under which consciousness is possible."[7] If they were correct, we should not have even the word Infinite. No one will dispute the proposition that all our knowledge is of relations between things and that everything is related to other things. If then *ex hypothese,* a something called the Absolute exists in some transcendental manner related to nothing whatever, then plainly I cannot know it. It is for me a nonentity! I have nothing to do with it and it has nothing to do with me. Comte then would be right in advising men to leave such an empty abstraction severely alone. Spencer, like Mill before him, pointed out that the words infinite and unconditioned are adjectives and have no meaning apart from objects. They cannot be formed into concrete abstractions (if such a phrase is permitted) by printing them with capitals. The negative elements Mansel emphasized are simply read into them by the omission of any object for them to qualify. When used as proper adjectives, they are not negative, but intensely affirmative. They have no power to make an object of which we are thinking disappear as soon as we think of it as "infinite." On the contrary, they extend and intensify the quality to which we attach them. Infinite space and time cannot be thought of clearly for they have no limits, but they remain space and time within the farthest reach of our minds. The ultimate Reality is at once known and unknown, even as our being is known and unknown. We know ourselves intimately, and other men sufficiently for all purposes of intercourse and love, but we do not know even our own being as a "whole" in all relations to God and man, still less can we know ourselves through and through. The subconscious realm is as deep and broad as the conscious. Human personality is almost as great a mystery as the Divine.

[7] As quoted by Spencer, *First Principles,* § 26.

But if we are greater than we know, if we cannot explain or conceive the self, and yet do know its reality with absolute certainty, then the Infinite Self may also be known to our spirits in certain aspects and yet transcend us in others. This much we willingly grant to the law of relativity.

Confusion also arises from confounding the mathematical infinity of quantity with the moral infinity of quality. We know things only by their limits in space and relations to other things, but persons we know through their qualities. We know them truly and sufficiently for all purposes of mutual intercourse and affection. Such personal knowledge of God as Father, Redeemer, and Sanctifier, is possible, for the "infinity" of the attributes through which we know Him means simply that they exist in Him in ideal perfection, free from the limitations in will and act which thwart them in all human experience. Partial knowledge of an infinite person (infinite as self-existent and perfect in all attributes) may be true to the divine fact, though necessarily incomplete. In no part of infinity do qualities change their essence, and we can know them, for though they transcend the same qualities in ourselves, they never contradict them.

Spencer thinks only in terms of quantity, and the Infinite for him is the Eternal Energy, of which all the cosmic phenomena are the appearances! Thus he leaves on one side Hamilton's metaphysics about the Absolute, which exists out of relations and without qualities and cannot be a cause at all. He holds that the Infinite is not a negative but a positive idea, corresponding to a Reality which can be apprehended but not comprehended —"a necessary datum of consciousness, having a higher warrant than any other whatever," and our "indefinite" knowledge of it may be true. Its authority transcends all other authorities whatsoever, for not only is it given in the very constitution of our own consciousness, but we cannot even conceive a consciousness so made as not to give it.[8] "Besides that *definite* consciousness of which logic formulates the laws,

[8] See Note O.

there is also an *indefinite* consciousness which cannot be formulated. Besides complete thoughts, and besides the thoughts which though incomplete admit of completion, there are thoughts which it is impossible to complete, and yet which are still real, in the sense that they are normal affections of the intellect." [9] "This consciousness of an Incomprehensible Power, called Omnipresent from inability to assign its limits, is just that consciousness on which Religion dwells." [10] He proposes to reconcile science and religion by assigning to the first all that may be known definitely, the realm of "facts," and to religion what is felt, but cannot be known, the realm of feeling without contents at all.

This is a division which would only result, as we know it has resulted, in practical atheism, cool indifference to any thought of God, for humanity will never be content to worship with lowly adoration before the fog of an unknowable something. In *Mind, Motion, and Monism* Romanes, who was once his devout disciple, thinks that he knows too much about the Unknowable to be a pure agnostic. "The distinctive features of Mr. Spencer's doctrine of the Unknowable are not merely non-agnostic, but anti-agnostic. For the doctrine affirms that we have this much knowledge of God — namely, that if He exists, He must for ever be unknown. Without question, this would be a most important piece of definite knowledge with regard to Deity, negative though it be; and, therefore, any man who holds it has no right to be called an agnostic. To me it has always seemed that the doctrine of the Unknowable, in so far as it differs from the doctrine of the Unknown, is highly unphilosophical. . . . It is a perfectly philosophical statement for any one to make that, as matters now stand, he can see no evidence of Theism; but to say that he knows the human race never can have such evidence, is a most unphilosophical statement, seeing that it could only be justified by absolute knowledge. And, on this account, I say that the doctrine

[9] Spencer, *First Principles*, §§ 27, 34.
[10] *Ibid.*, § 27.

of the Unknowable . . . is the very reverse of agnostic." [11]

Our controversy with Spencer, therefore, concerns not his agnosticism so much as his confident gnosticism, his dogmatic declaration that infinite Being must and shall be forever unknowable, and especially his cool assumption of authority to define the Unknowable solely in terms of "force," which he apprehends within certain limits determined by his purely scientific training. "It" is not passive and inert but intensely active. It is energy infinite and eternal, all pervasive, omnipotent, the ever present cause and sustainer of the phenomenal world, which is its manifestation. Thus far we may go with his kind permission, but no farther. To use not only our sense experience but also our inner consciousness of personality, moral character, and freedom is to transgress the limits of knowledge. To ascribe to the infinite Reality back of phenomena, consciousness and will and moral character is a transcendent audacity, a marked illustration of "the impiety of the pious." [12]

But his own very definite apprehension of the Unknowable and its physical qualities is an act of pure faith. He trusts the witness of his own consciousness far beyond the testimony of his senses. All this is known with deepest conviction on the ground, not of experiment or of science, but through our inner noumenal experience, somehow in touch with noumenal Being — a position which his European critics tell him involves the denial of his whole system of thought.

But if we trust it this far, why not go farther with equal certainty? If we know this much of the "infinite and eternal energy" from which all things proceed, why must we think it in terms of physical force only, and not in the deeper terms of that very consciousness to which he appeals for the proof and certainty of its reality? As the only force I know is my own will power working to a definite purpose, why may I not hold with equal certainty that infinite extention implies infinite in-

[11] Pp. 117, 118.
[12] *First Principles*, §§ 27, 34.

tention? If my intuition of causality justifies my believing in a universal, eternal cause, why do not my equally strong intuitions of final cause, of personality, and of moral duty justify me in looking on "It" as also necessarily intelligent and personal in the highest sense and the source and ground of eternal righteousness?

It is well, therefore, to recognize and proclaim the truth that logical consistency is not the whole of reality, and that the revolt of the heart against the "facts" of science wrought into a cast-iron system, is just as legitimate as the supercilious denial of the faiths of the heart by the cold logic of mere understanding. "Stay," says the alchemist to his weeping wife in Balzac's powerful novel: "Stay! I have decomposed tears. They contain a little phosphate of lime, some chloride of soda, some mucus, and some water."

It is Herbert Spencer himself who is guilty of the audacity of limiting the trustworthy elements in the consciousness of man to the few which he has chosen to use in his singularly limited point of view. Why should I limit my appeal to the witness of purely scientific minds already prejudiced, which foreclose any of the higher faiths and hopes of men? Why not trust the wider and deeper consciousness of the master minds of the race, before "science" atrophied the power of faith and clear vision? Why may I not follow the soaring thought of Plato rather than the earth-bound vision of Spencer? "O ye heavens," exclaims the seer, "can we ever be made to believe that action and life and soul and mind are not the possession of Perfect Being? Can we imagine that it is devoid of all thought and exists only in meaningless quietude?" Should we not use all that is highest in us in the interpretation of the infinite First Cause, and believe with Aristotle, that it is and must be God — life itself and thought in itself, and the good in itself, each in perfection!

"The deepest thing in our nature is this *Binnenleben* (as a German doctor lately has called it), this dumb region of the heart in which we dwell alone with our willingnesses and unwillingnesses, our hopes and fears. . . . Here is our deepest

organ of communication with the nature of things; and compared with these concrete movements of our soul all abstract statements and scientific arguments — the veto, for example, which the strict Positivist pronounces upon our faith — sound to us like the mere chatterings of the teeth. For here possibilities, not finished facts, are the realities with which we have actively to deal, and 'as the essence of courage is to stake one's life on a possibility, so the essence of faith is to believe that that possibility exists.'" [13]

Ethical Agnosticism

This adds to Spencer's Unknowable Energy what Spencer denied to it — the attribute of righteousness on the ground of our ethical consciousness. As the universe is a system of physical order demanding an eternal cause, so it is also a moral order, the source of which must be in the Ultimate Reality. But this view agrees with the preceding in denying personality to the Unknowable.

It was held by the Roman Ethical Stoics. Its first modern exponent was Kant, who in his *Critique of Practical Reason* and *Critique of Judgment,* advanced beyond his earlier nescience to the affirmation of an Eternal Righteousness at work in the universe with a moral aim, the physical world existing only for the ethical perfection of man. Fichte developed this side of the Kantian philosophy — the moral order itself is God. In England its chief advocates have been Carlyle and Matthew Arnold. Matthew Arnold's view is given fully in *Literature and Dogma.* He says that the moral aspect exhausts the possible knowledge of Israel's God, and we must not suppose that the Jewish religion necessarily required or ever believed this Something to be personal. "God was to Israel neither an assumption nor a metaphysical idea; He was a power that can be verified, as much as the power of fire to burn or of bread to nourish; *the power, not ourselves, that makes for righteousness.* And the greatness of Israel in religion, the reason why

[13] William James, *Is Life Worth Living?*

he is said to have had religion revealed to him, to have been entrusted with the oracles of God, is because he had in such extraordinary force and vividness the perception of this power. And he communicates it irresistibly because he feels it irresistibly; that is why the Bible is not as other books that inculcate righteousness." [14]

This view may be met by the simple argument that there can be no moral order or ethical aim in the universe without ethical will and character in the world's Source and Sustainer. An impersonal power that makes for righteousness is a contradiction in terms. It must mean either "makes for" in the sense of aiming at righteousness, or else "produces righteousness," though the phrase hardly admits that meaning. We must have either Theism or Atheism, there is no half-way house.

F. H. Bradley comments that after all his grandiloquence about the Eternal, Arnold tells us we cannot really know anything that is eternal, "unless we give that name to whatever a generation sees happen, and believes both has happened and will happen, just as the habit of washing ourselves might be termed 'The Eternal not ourselves that makes for cleanliness,' or early to bed and early to rise, 'the Eternal not ourselves which makes for longevity,' and so on; that 'the Eternal,' in short, is nothing in the world but a piece of literary claptrap. . . . If what is meant is this, that what is ordinarily called virtue does always lead to and go with what is ordinarily called happiness, then so far is this from being 'verifiable' in everyday experience, that its opposite is so; it is not a fact either that to be virtuous is always to be happy, or that happiness must always come from virtue. . . . 'Is there a God?' asks the reader. 'Oh, yes,' replies Mr. Arnold, 'and I can verify him in experience.' 'And what is he then?' cries the reader. 'Be virtuous, and as a rule you will be happy,' is the answer. 'Well, and God?' 'That is God,' says Mr. Arnold. 'There is no deception, and what more do you want?' I sup-

[14] P. 182.

pose we do want a good deal more. Most of us, certainly the public which Mr. Arnold addresses, want something they can worship; and they will not find that in an hypostasized copy-book heading, which is not much more adorable than 'Honesty is the best policy' or 'Handsome is as handsome does,' or various other edifying maxims which have not yet come to an apotheosis." [15] Arnold deserves such sharp criticism because of his flippant flings at Christian belief all through his book.

Lange closes his instructive *History of Materialism* by the earnest warning to hold fast to noble ideals as we value our manhood. David Strauss in his destructive *The Old Faith and the New* pauses to moralize on the mystery of the vast power back of all we see, and the comfort of the feeling that we are somehow akin to it.[16] Haeckel, the veritable *sans cullotte* of materialism, who exultingly assures us that his monism "shatters the three dogmas of religion, the personality of God, the immortality of the soul, and the freedom of the will," bids us take heart and find comfort in the cult of the good, the beautiful, and the true!

Truly this is feeding on the wind! Martineau may well warn us in noble words of the vanity of trusting to such illusions. "Amid all the sickly talk about 'ideals,' which has become the commonplace of our age, it is well to remember that, so long as they are dreams of future possibility, and not faiths in present realities, so long as they are a mere self-painting of the yearning spirit, and not its personal surrender to immediate communion with an Infinite Perfection, they have no more solidarity or steadiness than floating air-bubbles, gay in the sunshine, and broken by the passing wind. You do not so much as touch the threshold of religion, so long as you are detained by the phantoms of your own thought: the very gate of entrance to it, the moment of its new birth, is the discovery that your gleaming ideal is the everlasting Real, no

[15] *Ethical Studies*, p. 283–5.
[16] P. 164.

transient brush of a fancied angel wing, but the abiding presence and persuasion of the Soul of souls. . . .

"The rule of right, the symmetries of character, the requirements of perfection, are no provincialisms of this planet; they reign beyond Orion and the Southern Cross: they are wherever the universal Spirit is; and no subject mind, though it fly on one track for ever, can escape beyond their bounds. Just as the arrival of light from deeps that extinguish parallax bears witness to the same ether there that vibrates here, and its spectrum reports that one chemistry spans the interval, so does the law of righteousness spring from its earthly base and embrace the empire of the heavens, the moment it becomes a communion between the heart of man and the life of God." [17]

[17] *A Study of Religion,* Vol. I, pp. 12 and 26.

APPENDIX

NOTE A

POSTULATES AND INTUITIONS

Before defining an intuition, it would be well, in the interest of clearness, to define also an axiom.

An axiom is a general proposition or principle accepted as self-evident, either absolutely or within a particular sphere of thought. Each special science has its own axioms (Cf. the Aristotelian ἀρχαί "first principles.") Aristotle considers that there are ultimate principles of thought which are behind all special sciences. According to his usage, these axioms, in which the sciences interconnect, are implicit in the psychological mechanism, but come to a kind of explicitness in the first reflective reaction upon it, and without reference to any particular content of it. They are not to be used as premises, but as immanent laws of thought.[1] Descartes and his followers used the word as a definite self-evident principle, the basis of philosophy. Kant narrowed it to include only self-evident (intuitive) synthetic propositions (*i.e.*, space and time).

Intuition in philosophy is a term applied to immediate or direct apprehension. Universal principles present themselves, as necessarily true in their own right without any sort of proof. The word "intuition" as used below would therefore correspond to "axiom." Intuitions are truths laid down by our rational constitution and our ethical needs. They form the pre-suppositions of all reasoning. Without them even speech is impossible. As men's bodies are built on a common plan, so are their minds constructed on the common frame of like intuitions and methods of working. Herbert Spencer admits that there must exist certain principles which, being the basis of science, cannot themselves be established by science. "The fundamental intuitions that are essential to the process of thinking must temporarily be accepted as unquestionable; leaving the assumption of their unquestionableness to be justified by the results."[2] The word intuition, like conception, is both a substantive and a verbal noun. It means the act of intuiting in direct vision and also that which is intuited. Kant distinguishes between empirical and pure intuition, but the English usage rightly confines the word to pure intuitions, for so-called empirical intuitions are not in-

[1] *Anal. Post,* Bk. I, Chaps. 2, 3, 10, 32, Bk. II, Chap. 19.
[2] *First Principles,* § 39.

tuited directly, but through the medium of the senses. Pure intuitions are ideas of the Reason which arise spontaneously and with convictive force in the normal mind, as it becomes conscious of itself and of the world. Experience does not create, but it does awaken and develop them. They are thoughts or judgments which arise coincidentally with all experiences, but the experiences do not create them, for intuitions are concerned with relations between things, and relations are perceived only by the mind. Impressions on the senses do not form knowledge but only the material for knowledge, for knowledge results from the action of the mind on those impressions. On the other hand, intuitions cannot work until experience of things without awakens them to action and furnishes material for thought. We have eyes with which to see, but we cannot use them so long as all is dark, and there is nothing to see. We see before we know how we see, but when once we discern our eyes we know we could not see without them. The acorn cannot grow without air, light, and water, but in all eternity the three conditions could not create the living seed. Life itself is the best analogy; intuition is dynamic, directive; it organizes the material given by perception, much as the life germ dominates the particles which go to form the tree.

Postulates are propositions deliberately taken for granted, because necessary for the purpose of life and thought, but not in themselves evident beyond question. Kant held that the postulates of experience are general expressions of the significance of existence in the experience of a conscious subject. The element of reality in such experience must always be given by intuition. Lotze gives a contrast between postulates and hypotheses, which will make the definition clearer. He says that postulates are "absolutely necessary assumptions without which the content of observation with which we are dealing would contradict the laws of thought," while hypotheses are "conjectures, which seek to fill up the postulate thus abstractly stated by specifying the concrete causes, forces or processes, out of which the given phenomenon arose in this particular case, while in other cases maybe the same postulate is to be satisfied by utterly different though equivalent, combinations of forces or active elements." [3] Thus a hypothesis may be ruled out by postulates without any reference to the concrete facts which belong to that division of the subject to explain which the hypothesis was formulated.[4]

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[3] Logic, § 273.

[4] These definitions of axioms and postulates are largely taken from *Encyclopedia Britannica,* 11th Edit., III, 68; XIV, 208, 717; XV, 670; XVI, 902.

Marks of Intuitions

The marks of Intuitions are, I. Necessity; II. Rationality; and III. Universality (a corollary of I and II).

I. *Necessity*

Intuitions are necessary in that they arise of themselves under proper stimulus in every normal mind. They are logically necessary in that the mind accepts them as self-evident, as in the case of mathematical axioms.

II. *Rationality*

Rationality is a mark of intuitions because they are themselves the principles of reason. A simple test is the impossibility of denying them. They act from the very beginning of thought, as when a child asked his mother, "What was there before God made the world?" She answered "God." "And what was there before God?" "Nothing, my child." "But there must have been a place where God was." Here the great intuitive principles of space and time dominated the child's thought. The principles of mathematics and of grammar are examples of rational intuitions. Mathematics is the best illustration of the internal, rational nature of intuitions. The axioms of mathematics are true in themselves and hence the basis of logical reasoning. The story is told of the mathematician Pascal that his father tried to keep him when a boy of twelve from studying mathematics until he had mastered Latin and Greek. But when the boy insisted on knowing what mathematics was, his father told him that in general it was the means of making figures rightly and of discovering their relative proportions. Pascal, alone in his play room, meditated on this statement in his recreation hours, and made figures on a board with charcoal. He did not even know the names of what he drew, but called a circle a "round," and a line a "bar," and so forth. After inventing his definitions, he made axioms, and finally complete demonstrations. When his father at last discovered what he was doing, the boy had pushed his researches as far as the thirty-second proposition of the first book of Euclid.[5]

The science of logic is also an excellent example. The syllogism was not the invention of one man, Aristotle, for it is universally inherent in all men and does its own work in the mind. Aristotle merely put the principle into words. All we do when we write out a syllogism is to express the law of the mind in a formal way. But the argument convinced even before it was expressed formally, because it followed the laws of reason.

[5] Clark, *Pascal and the Port Royalists,* pp. 3–6.

There is a corollary to this mark of rationality which might be suggested here. The logical necessity of these intuitive truths carries with it the conviction that they must correspond to realities. We cannot think that the necessities of reason can be false, because the reason of man is also the reason of God; as Plato said, "God geometrizes." Lotze holds that the confidence of reason in itself is the certainty we feel that there is a meaning in the world and that the nature of the great universe of which we are thinking parts must be such that it would give us as necessary ideas only such as harmonize with its own realities.[6]

III. *Universality*

Universality follows from the necessity of intuitions. A principle which is necessary to every normal mind must be universal. Indeed universality is itself a ground for believing in the fundamental character of intuitive conceptions. But they are also universal in that they relate to and govern all the operations of the mind and originate our general or universal ideas.

On the practical side this catholic mark reveals a universal reason, a *communis sensus,* making common experiences in perception and common modes of thought possible. One of the deep sayings of Heraclitus is that "the law of all things is the law of Universal Reason, but many men act as if they had a private reason of their own." The value of this mark of universality is its testimony to the Logos in all men, making experience and common knowledge possible. Men early felt that beliefs common to all could not be false.

Classes of Intuitions

The simplest classification gives three kinds of intuitions; I. Ontological, Intuitions of Being or Reality: God, self, the world; II. Logical, of relation between things: space, time, causation; III. Personal or ethical, of relation between persons: morality, religion, etc. These correspond to the three great divisions of human thought, each with its primary assumption: Philosophy, God and Self; Science, the World; Religion, God in relation to Man.

I. *Intuitions of Being*

These are the three bases of all thought — God, the Self, and the World; or in the order in which they originate, the Self, the World, and God. Kant defines these as the Ideas of Reason, the three regulative principles involved in the very nature of the mind, and to which no congruous objects exist in the sphere of empirical cognition. "Beyond the sphere of experience there are no objects which reason

[6] Cf. *System of Philosophy,* Part II, Metaphysic, pp. 412 and 535, 6.

can cognize," so we cannot have any clear idea of them. "They are not to be regarded as actual things, but as in some measure analogous to them." We must posit the real existence of the objects, but we cannot profess to know those objects.[7]

Locke admits that we know these three existences with a peculiar certainty, different from all other ideas and not the result of any logical process or proof.

Herbert Spencer accepts these as the intuitions without which we cannot think at all. But he defines them in Spencerian dialect in accord with his denial of the mind's innate activity. 1. Force, the ultimate of ultimates, the unknown cause of the known effect we call phenomena (God). 2. Likeness and unlikeness among these effects. These arouse ideas of time and space, cause and effect, quality and quantity (The World). 3. A segregation of these effects into subject and object — the thinker and the thing known as thought (The Self).[8]

II. *Intuitions of Relations Between Things*

Space and time. These intuitions are the fundamental forms of thought without which we cannot know or think the outer world of things. The root concept of Time is succession; that of Space is co-existence. The one yields the science of number — Arithmetic; the other the science of form — Geometry.

Some of the elements in our concepts of space and time may be grouped comparatively:

Time	*Space*
There is but one time, and all different times are parts of the one.	The same.
Different times are not co-existent or simultaneous, but successive.	Different spaces are not successive, but are coexistent or simultaneous.
Time cannot be thought away; but everything in time can be thought away, or imagined as non-existent.	The same.
Time has three divisions, Past, Present, and Future.	Space has three dimensions, Length, Breadth and Thickness.

[7] *Critique of Pure Reason:* Transc. Dial. Bk. II, Chap. III.
[8] *First Principles,* § 51.

Time is infinitely divisible. Time is homogeneous and continuous.	The same.
By means of time we count.	By means of space we measure.
Time has no persistence, but no sooner exists than it vanishes.	Space can never pass away, but persists forever.
Time has no rest.	Space has no motion.
Everything in time has duration.	Everything in space has position.
Time itself has no duration, but all duration is in it, and is the persistence of that which abides or continues, in contrast with time's own restless lapse.	Space has no movement, but all movement is in it, and the movable's change of place is in contrast with the absolute immobility of space.
The unit of time is without duration.	The unit of space is without extension.
Every part of time is conditioned by every other part.	The same.
Time is everywhere present. Every part of time is everywhere, *i.e.*, simultaneously in every part of space.	Space is eternal; every part of it exists through all time.
Time makes changes possible. Forces act in time as their precondition, but time itself does not act, is not an agent.	Space makes substance possible. Substances exist in space as their precondition.

Time and Space form the puzzle of philosophy. Kant held that they were purely subjective though necessary forms of thought. In the second edition of the *Critique of Pure Reason* he denied that he was an idealist. But his successors were more logical, and his original position became the starting point of modern Idealism. The discussion of space and time has been greatly enriched by Bergson in *Time and Freewill.*

Substance and Causation. These intuitions are both awakened by our inner experience of will-power. The essence of substance is impenetrability, it occupies space and offers resistance to our pressure.

All bodies have certain primary qualities, extension, weight, and form. Substance means that which underlies them, and expresses the universal belief that qualities cannot exist *per se,* but always inhere in matter which gives them support and reality.

Substance is out of favor in many philosophic quarters today, but it cannot be denied logically save on some theory of thoroughgoing Idealism, for no experience is so direct and immediate as the sense of resistance to our force. Modern science makes for substance in its theory of the identity of the ultimate particles of matter, the qualities of the atoms varying according to the mode of combination, or motion, of the corpuscles or electrons.[9]

The intuition of causality, that is, "every effect must have a cause," is a clear example of an intuitive judgment, for we never see the "force" which actually causes the motion, and we believe it acts simply on the ground of our own experience of causing motion by our muscular force. The intuition of cause must be used to interpret all experience.

The remaining relations between things may be summarized in the categories as set forth first by Aristotle and later by Kant:

Categories

Quantity	Quality
Unity.	Reality.
Plurality.	Negation.
Totality.	Limitation.
Relations proper	**Modality**
Substance and Accidence.	Possibility and Impossibility.
Cause and Effect.	Existence and Non-existence.
Action and Reaction.	Necessity and Contingence.

"Kant's successor, Hegel, pointed out that his list of categories was incomplete in various directions: also that a special category or categories ought to be added for organic life, as the idea of life is one of the fundamental ideas. There is no reason why a category or general conception of life should not be just as much constitutive of our experience as the category of substance."[10]

III. *Intuitions of Relations Between Persons*

The intuitions of the first class are ontological; of the second, logical; of the third, ethical. The last hold only between persons, for duties are due only to persons and imply mutual obligations; rights and duties are correlative. The essence of moral intuition is the peculiar feeling

[9] See Chap. XIII, on "The New Theory of Matter."
[10] Haldane, *Mechanism, Life and Personality,* pp. 75, 76.

of oughtness different in kind from all other feelings. Conscience implies innate knowledge of ethical principles, just as the intellect demands common logical principles. As Origen said long ago, man would not be guilty of wrongdoing if all races did not have certain universal notions of duty innate and written in divine characters in their hearts.[11] Ethical intuitions stand the test of all other intuitions. They are necessary, for they form the basis of all social life without which man could not be man. They stand the test of rationality, for all the faiths and duties are dependent on these ethical relations. And they are universal, for they arise in all normal minds. Every race has the sense of duty.

It has been urged that these moral intuitions are not as certain and fundamental as the logical, because they are not as intense and compelling. In the ethical realm there is no room for force. Things of the senses must be felt or known whenever presented to us, but in moral life we must will in order to know or clearly see our duty. We can close our wills to the claims of the soul as we cannot shut our eyes to the demands of the body. Huxley answers the objection that the moral sense is weak in some men; "Some people cannot by any means be got to understand the first book of Euclid; but the truths of mathematics are no less necessary and binding on the great mass of mankind. Some there are who cannot feel the difference between a grave-stone-cutter's cherub and the Apollo Belvidere; but the canons of art are none the less acknowledged. While some there may be, who, devoid of sympathy, are incapable of a sense of duty; but neither does their existence affect the foundations of morality. Such pathological deviations from true manhood are merely the halt, the lame, and the blind of the world of consciousness; and the anatomist of the mind leaves them aside, as the anatomist of the body would ignore abnormal specimens." [12]

But this principle applies equally to spiritual convictions and faiths. That some men do not realize spiritual realities does not discredit these realities to those who do. Darwin felt this of his spiritual dullness which he acknowledged to be the result of his devotion to the sole study of outer things and his ignoring of the inner world. "It may be truly said," was his comment, "that I am like a man who has become color-blind." [13]

Even Hume had a similar thought. "The mathematician, who took no other pleasure in reading Virgil, but that of examining Æneas's voyage by the map, might perfectly understand the meaning of every

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[11] *Contra Celsus*, I :4.

[12] *Hume, with Helps to the Study of Berkeley*, p. 239.

[13] F. Darwin, *Life and Letters of Charles Darwin*, Vol. I, p. 81; Vol. II, p. 281.

Latin word employed by that divine author; and, consequently, might have a distinct idea of the whole narration. He would even have a more distinct idea of it than they could attain who had not studied so exactly the geography of the poem. He knew, therefore, everything in the poem: but he was ignorant of its beauty, because beauty, properly speaking, lies not in the poem, but in the sentiment or taste of the reader. And where a man has no such delicacy of temper as to make him feel this sentiment, he must be ignorant of the beauty, though possessed of the science and understanding of an angel." [14]

That religious faith is not so strong and constant as the intuition of the self and the world is the result of the alienation of man from God through his evil will. God is not a phenomenon manifested through the senses and is therefore not to be ignored, but a Person holding personal relations with men. In all such relations, intimate knowledge and friendship depend on sympathy. We must will in order to know.

NOTE B

ARISTOTLE'S CAUSES

Aristotle's four causes are the Material, the Formal, the Efficient, and the Final.

I. The Material Cause is that which underlies the phenomenon: the matter out of which it proceeds or is made. It is not a true cause but a necessary condition of the event, a *sine qua non* of the effect. It means often the material out of which a thing is made; also "matter of thought," such as the premises of a syllogism.

II. The Formal Cause is the form or idea of the thing or act, which exists first in the mind, and which we gradually embody in matter or express in action. In the case of divine action Aristotle called the form the essence of the thing, for divine thought is creative. The best analogy is the artist who paints a picture simply to express some beautiful vision, with no ulterior object — its beauty is its own excuse for being.

III. The Efficient Cause is the force which directly causes motion or change to begin, the force being directed by the will along definite lines. It is the true cause or force and the only kind of cause that pure science recognizes. Aristotle expresses the relation of Final to Efficient Cause as the passage from potentiality to actuality. This efficient cause may be either immanent, *e.g.*, life force, or it may be mechanical, operating from without.

IV. The Final Cause is the end or purpose for which the thing is made. If the artist paints a picture for the money it will bring him,

[14] *Essays*, Part I, No. 18, *The Sceptic*.

and not for its own sake, the profit is its final cause. It differs from the Formal, in that it looks beyond itself and becomes a means to something else. Practically all intentional actions express final causes, ends, and aims. In Divine action the Final Cause is the Good.

(*Metaphysics,* Bk. I, Chap. 3, *Physics,* Bks. I and II, *Post. Anal.,* Bk. II, Chap. 11.)

NOTE C

HUME'S INCONSISTENCY

Hume is not consistent. He claims that all thought is derived ultimately from perceptions of sense impressions or from ideas which are faint images of impressions. Yet he admits a great number of ideas of which the simplest would vanish before the demand to point out the impression from which it is derived. He cannot avoid using terms which are dynamic, although he denies the reality of force. He says that "the true idea of the human mind is to consider it as a system of different perceptions or different existences, which are linked together by the relation of cause and effect, and mutually produce, destroy, influence, and modify each other."[1] Here all his terms are those of energy, and he does not seem able to escape thinking in terms of causation, although he wrote elsewhere "no internal impression has an apparent energy, more than external objects have."[2] He is unwilling to consider causality as real, yet he goes so far as to make custom the great guide of life, an active principle or law of the mind. But most glaringly does his inconsistency appear when he denies the possibility of miracles because they are violations of the laws of nature. In his earlier days he had claimed there was no such thing as a law of nature, for that implies causal connection, and everything in nature happens haphazardly. Besides they carry us back to the idea of God, which he began by denying.

The best test is whether Hume can live up to his theory. He himself admits that he cannot make his system work, but leaves such philosophical views to his study. "Most fortunately it happens, that since reason is incapable of dispelling these clouds, Nature herself suffices to that purpose, and cures me of this philosophical melancholy and delirium, either by relaxing this bent of mind, or by some avocation, and lively impression of my senses, which obliterate all these chimeras. I dine, I play a game of backgammon, I converse, and am merry with my friends; and when after three or four hours' amusement, I would return to these speculations, they appear so cold and strained, and

[1] *Human Nature,* Bk. I, Pt. IV, § 6.
[2] *Ibid.,* § 14.

ridiculous, that I cannot find it in my heart to enter into them any further."[3] No man today denies results accepted by science, and just as long as scientists stay in their province their results are convincing, for they are universal and tally with what we already know and have experienced.

NOTE D

PSYCHICAL CAUSATION

In what has been said above we have been interested chiefly in physical causation in the external world. Villa, however, shows that in the interior psychical realm this same principle assumes a different form. "The causal principle, which is one of the most important axioms in logic, as applied to the relations between external objects, assumes a particular form which is termed physical, or mechanical causality. This principle is not solely founded on the general notion that every fact must be both the cause and effect of other facts: but it also shows that the quantity of matter and energy which forms the substratum of physical phenomena remains unaltered, though its form varies. Between the cause and effect there exists, therefore, an equivalent of value. Quantitative equivalence is the distinctive characteristic of mechanical causality, while it is entirely absent in the case of psychical causality, which has to take into account such subjective and variable elements as feelings and impulses. Consequently, although external facts have their part in mental phenomena, the latter cannot possess that character of comparative fixity which alone renders a quantitative measurement possible. In its absence there can be no exact correspondence of cause and effect. Moreover, the mental processes, considered by themselves, entirely lose the character of quantity, retaining only that of quality. For example, a sensation, taken by itself is purely a qualitative fact (endowed with a certain amount of intensity), and nothing more; and if the notion of quantity cannot be applied to sensations, it is even less applicable to the feelings, which are eminently qualitative facts. We have, therefore, two causal series — a mechanical series, which is quantitative, and a psychical series, which is qualitative. We cannot, however, insist too much on the fact that there are not in reality two distinct series, that the distinction is merely an abstraction of our own thought." (*Contemporary Psychology*, p. 114.)

[3] *Ibid.*, § 7.

NOTE E

KANT'S STATEMENT OF THE TELEOLOGICAL PROOF

Kant gives the following as the main points in the proof:

"1st. There are everywhere in the world clear indications of an intentional arrangement carried out with great wisdom, and forming a whole indescribably varied in its contents and infinite in extent.

"2nd. The fitness of this arrangement is entirely foreign to the things existing in the world, and belongs to them contingently only; that is, the nature of different things could never spontaneously, by the combination of so many means, cooperate towards definite aims, if these means had not been selected and arranged on purpose by a rational disposing principle, according to certain fundamental ideas.

"3rd. There exists, therefore, a sublime and wise cause (or many), which must be the cause of the world, not only as a blind and all-powerful nature, by means of unconscious *fecundity,* but as an intelligence, by *freedom.*

"4th. The unity of that cause may be inferred with certainty from the unity of the reciprocal relations of the parts of the world, as portions of a skilful edifice, so far as our experience reaches, and beyond it, with plausibility, according to the principles of analogy." (*Critique of Pure Reason,* 2nd Division, Bk. II, Chap. 3, § 6.)

(The language used under the 2nd has been held to imply a deistic conception of the divine action as from without. But Kant may have used the words "foreign" and "contingent" to imply only that more mechanical forces could not contain or do the work of the mind.)

NOTE F

EXAMPLES OF THE RATIONAL CONSTITUTION OF THE UNIVERSE

In Mendeléeff's Law (1869) we have the chemical elements divided into eight groups or families. Each family differs from the others in ways determined by a definite plan of proportional atomic weight, heat receptivity, etc. When the table was first constructed three elements now included in it were not known, scandium, gallium, and germanium. It was seen, however, that the gaps existed, and it was predicted by Mendeléeff that elements would be found with atomic weights approximately 44, 69, and 72, and that these elements would have certain properties which were clearly stated at the time. The predictions were confirmed by the subsequent discovery of all three of these elements, and

their properties were found to agree very closely with the descriptions given long before the elements were known. But Mendeléeff was to be still further vindicated. Lord Rayleigh discovered helium and argon in the atmosphere, and from an investigation of the properties of these two gases, made specially from the point of view of the periodic classification of the elements, Ramsay concluded that there ought to exist three other simple bodies, of similar properties and of higher atomic weight, which would, together with helium and argon, make a new family in Mendeléeff's table. After having searched everywhere for these elements, he succeeded in finding them in the air and in isolating them. These gases are neon, krypton, and xenon.

Thomas Hill has such an excellent discussion on these lines that it is well to quote him at length. "It is from these diagrams of nature that men get their first suggestions of geometric beauty and law, and are stimulated to the invention of new laws. Nor can we fail to notice how frequently the law which men have invented, proves to have been already known and used in nature. The mathematician devises a geometric locus, or an algebraic formula from *a priori* considerations, and afterwards discovers that he has been unwittingly solving a mechanical problem, or explaining the form of real phenomenon. Thus, for example, in Peirce's *Integral Calculus,* published in 1843, is a problem invented and solved purely in the enthusiasm of following the analytic symbols, but in 1863 it proved to be a complete prophetic discussion and solution of the problem of two pendulums suspended from one horizontal cord. Thus also Galileo's discussion of the cycloid proved, long afterward, to be the key to problems concerning the pendulum, falling bodies, and resistance to transverse pressure. Four centuries before Christ, Plato and his scholars were occupied upon the ellipse as a purely geometric speculation, and Socrates seemed inclined to reprove them for their waste of time. But in the 17th century after Christ, Kepler discovers that the Architect of the heavens had given us magnificent diagrams of the ellipse in the starry heavens; and, since that time, all the navigation and architecture and engineering of the 19th century have been built upon these speculations of Plato. Equally remarkable is the history of the idea of extreme and mean ratio. Before the Christian era, geometers had invented a process for dividing a line in this ratio, that they might use it in an equally abstract and useless problem — the inscribing a regular pentagon in a circle. But it was not until the middle of the present century that it was discovered that this idea is embodied in nature. It is hinted at in some animal forms, it is very thoroughly and accurately expressed in the angles at which the leaves of plants diverge as they grow from the stem; and it is embodied approximately in the revolutions of the planets about the sun. . . .

"Now in all these cases of the embodiment in nature of an idea

which men have developed, not by a study of the embodiment, but by an *a priori* speculation, there seems to us demonstrative evidence that man is made in the image of his Creator; that the thoughts and knowledge of God contain and embrace all possible *a priori* speculations of men. It is true that God's knowledge is infinite and beyond our utmost power of conception. But how can we compare the reasonings of Euclid upon extreme and mean ratio, with the arrangement of leaves about the stem, and the revolutions of planets around the sun, and not feel that these phenomena of creation express Euclid's idea as exactly as diagrams or Arabic digits could do; and that this idea was, in some form, present in the Creation?" [1]

NOTE G

BERKELEY'S ARGUMENT FOR GOD

Berkeley's starting point is Locke's postulate of "material substance" as the mysterious ground and source of all the ideas which sense impressions somehow arouse in our minds. He asked, Why should we postulate as the World Cause a something called matter of which we know nothing? Why should we not believe that God is the Author of Nature in a direct and immediate way by Himself causing ideas to arise in the minds of all men in that definite and fixed order which we call the laws of nature. He thought he proved the reasonableness of this view by teaching that matter cannot exist apart from thought, for "to exist means to be perceived by some mind," either God's or man's, for only spirits exist, the Divine Being and human spirits.

He states his theory clearly and convincingly — for those who accept his philosophy — in Sections 145–148 of *The Principles of Human Understanding*. "From what has been said, it is plain that we cannot know the existence of other spirits otherwise than by their operations, or the ideas by them excited in us. I perceive several motions, changes, and combinations of ideas, that inform me there are certain particular agents, like myself, which accompany them and concur in their production. Hence, the knowledge I have of other spirits is not immediate, as the knowledge of my ideas; but depending on the intervention of ideas, by me referred to agents or spirits distinct from myself, as effects or concomitant signs.

"But, though there be some things which convince us human agents are concerned in producing them, yet it is evident to every one that those things which are called the Works of Nature, that is, the far greater part of the ideas or sensations perceived by us, are not produced by, or dependent on, the wills of men. There is therefore some other Spirit

[1] *Natural Sources of Theology*, pp. 66–68.

that causes them; since it is repugnant that they should subsist by themselves. But, if we attentively consider the constant regularity, order, and concatenation of natural things . . . and at the same time attend to the meaning and import of the attributes One, Eternal, Infinitely Wise, Good, and Perfect, we shall clearly perceive that they belong to the aforesaid Spirit, 'who works all in all,' and 'by whom all things consist.'

"Hence, it is evident that God is known as certainly and immediately as any other mind or spirit whatsoever distinct from ourselves. We may even assert that the existence of God is far more evidently perceived than the existence of men; because the effects of nature are infinitely more numerous and considerable than those ascribed to human agents. There is not any one mark that denotes a man, or effect produced by him, which does not more strongly evince the being of that Spirit who is the Author of Nature."

Berkeley never escaped the influence of Locke. His "spirits" are simply minds working on logical lines. He never attained to the thought of the intuitive knowledge of God, spirit knowing spirit. God has to be inferred from the phenomena, the laws of nature, just as we infer other men's spirits from their bodily actions. But even on these purely logical lines it might have occurred to him by analogy that if men can give form and expression to their thoughts by means of undulations in the air so that other men can know them, and can even embody them permanently in picture and printed words, still more can God embody his thoughts on one side of His being in the visible world if He will.

His practical denial that the Creator could do this only perplexed men. For if God is the Author of all our ideas, He certainly must be the intentional source of that most persistent "idea," the conviction of an external world, which if Berkeley be right, is an utterly false idea.

NOTE H

SPINOZA, BACON AND DESCARTES ON TELEOLOGY

Spinoza, whose philosophy denied any free will or purpose in God, rejected all final causes as imaginary. He says that teleology inverts the true order of thought. Men found themselves possessed of sense organs, and as they were most useful, even indispensable, to their life they concluded that the Power which made them designed them for special purposes. But in fact, such things are only conditions of existence in the great totality of things. Sight, for example, is not the final cause of the eye as an instrument of vision, but rather the necessary result of the eye as it exists. Men have been guilty, according

to Spinoza of the fallacy of inversion. The idea of plan or design is posterior to the objects in order of time, since it is aroused in the mind by the sight of these objects. But men invert this natural order of things, and say that the plan was conceived first, and the objects made to conform to it. "The accusation is perfectly valid upon one condition; *viz.,* that there are no plans or purposes in nature back of the object, and according to which it was shaped. But suppose there are such plans and purposes? Then design-advocates have *not* been guilty of the fallacy of inversion. The plan did exist before the object; and it is not the human conception which is projected back into eternity as the Creator's thought, but that thought itself, which man *perceives* upon the contemplation of the object, instead of conceiving it as a 'fiction of his imagination.'"[1] Spinoza is plainly guilty of the logical fallacy of begging the question. "It is not a legitimate attack. Design-advocates assert that there are plans and purposes in nature. That is their main position. The fact that these are prior in time is involved in this fundamental proposition. Now, Spinoza's attack resolves itself into this: Upon the assumption that your fundamental proposition is *false,* you are guilty of a fallacy of inversion."[2]

The answer to this sophistry is simply that our minds are so made that we must interpret the Universe in terms of purpose, as Kant shows clearly in the *Critique of Judgment.* Our certainty as to the eye's final cause is confirmed by the fact that we can make a camera on the same general lines as the eye. Spinoza, however, did make a real contribution to the cause of teleology in his attack on the fallacy that the universe was made with reference to its utility to man. This was a common fallacy of his day and he helped to banish it. More will be said later about Spinoza's fundamental assumptions that all natural objects flow from God by virtue of a fatal necessity, for of course if this view is true, there are no such things as final causes.[3] But for the present we answer that our concept of God as personal and free and Lord of all is as credible as Spinoza's and more so. Our Deity is not a fatalistic creature, tied to his own nature, but a living, willing, and acting agent — and such a God does reason and plan.

Bacon spoke scornfully of final causes as "barren virgins," but to be accurate it was not final causes which he was criticizing, but the misuse of them, and it was the search for them in the province of physics that he said was barren. *Causarum finalium inquisitio sterilis est, et tanquam virgo Deo consecrata, nihil parit.* But the revelations of modern science have furnished so many examples to be used in an argument for final causes that it is impossible to agree with him. Bacon carried

[1] Hicks, *Critique of Design Arguments,* p. 131.
[2] *Ibid.*
[3] See Chap. XI.

his prejudice so far that he never accepted Harvey's discovery of the circulation of the blood, because it was based on the construction of the valves in the arteries and veins. Gassendi more wisely held that we should recognize divine intent in all organs whose purpose was plainly revealed.

Descartes opposed final causes by rebuking man's vanity in thinking he can discover them. "We wholly reject from our philosophy the search for final causes; for we ought not to take so much upon ourselves as to believe that God wished us to take part in his counsels." But his exclusion of final causes is more in appearance than in reality. He holds a theory of creation by vortices or whirlwinds, motions in the original matter, which resulted in the universe as we know it by a sort of evolution. "Even if He had given it (the Cosmos), at the beginning, no other form than that of chaos, provided that, having established the laws of nature, He gave it His concurrence to act as it is wont, one may believe, without prejudice to the miracle of creation, that by this alone things purely material would in time have been able to become such as we see them at present; and their nature is much more easy to conceive when they are seen originating by degrees in this way, than when they are considered as entirely made."[4] When Descartes elsewhere declares that he sought the laws of nature without resting on any principle but the "infinite perfections of God," was not this in reality to revert to the principle of ends, perfection being the supreme end?

NOTE I

CRITICISM OF DARWINISM

Charles Darwin's great work published in 1859 was epoch-making, for the world was ready for his theory, seemingly fortified beyond all question by the many illustrations from animal life. Others before him had held views of evolution, but none had ever brought to it such a wide knowledge of facts taken from a hitherto ignored field, that of the artificial breeding of stock and plant. The idea on which Darwin had been laboriously working occurred to his friend Alfred R. Wallace, about the time that Darwin was getting ready to make his theory public. It was during a sickness in the Malay Archipelago that Wallace applied the Malthusian theory to the whole organic world. He writes: "One day something brought to my recollection Malthus's *Principles of Population,* which I had read about twelve years before. I thought of his clear exposition of 'the positive checks to increase'—disease, accidents, war, and famine—which keep down the population of savage

[4] *Discours de la méthode.*

races to so much lower an average than that of more civilized peoples. It then occurred to me that these causes or their equivalents are continually acting in the case of animals also. . . . Vaguely thinking over the enormous and constant destruction which this implied, it occurred to me to ask the question, Why do some die and some live? And the answer was clearly, that on the whole the best fitted live. . . . Then it suddenly flashed upon me that this self-acting process would necessarily *improve the race,* because in every generation the inferior would inevitably be killed off and the superior would remain — that is, the *fittest would survive.*" That same evening Wallace began a paper on the subject which he sent by the next post to Darwin. Darwin had been working on the same idea for twenty years and had his book developing it nearly ready. It was characteristic of him that he insisted on Wallace sharing with him the honor of the discovery. Wallace with equal magnanimity gave the title *Darwinism* to his own book when it appeared thirty years later.

The voyage of the *Beagle* (1831–6) deserves to be ranked among the great voyages of discovery, for on it the young Darwin, as government naturalist, made observations which set him to work on his fruitful theory. He tells us this himself: "On my return home in the autumn of 1836, I immediately began to prepare my journal for publication, and then saw how many facts indicated the common descent of species. . . . In July (1837) I opened my first note book for facts in relation to the Origin of Species, about which I had long reflected, and never ceased working for the next twenty years." Two observations especially puzzled Darwin and made him seek an explanation. He found that each island in the Galapagos Archipelago had its own distinctive animal population. Yet the species on one island were the counterparts of those in the neighboring islands and were all related to the species on the continent. Only one explanation seemed possible, that they had belonged to a common stock before the days when the islands separated from the mainland and from each other, and had afterwards developed along their own lines. The other observation was that the living animals in South America bore a striking correspondence to the fossils he dug from the red mud of the Pampas. Again it was borne in upon him that the structural resemblance between the living and the extinct must be due to common origin. Thus the foundation was laid on which he was to build for a score or more of years after his return.

The title of Darwin's book clearly defines the theory, *The Origin of Species by means of Natural Selection, or The Preservation of Favored Races in the Struggle for Life.* The first section of this title is neither clear nor proven, but the second part is both clear and proven. Darwin was a most accurate observer, but hardly a philosophical thinker when it came to interpreting his facts. He wrote cautiously in order to

avoid giving offense, and tried to palliate all he said so as not to seem dogmatic. In his historical preface he quotes from writers of authority so as to pave the way for his views.

The last sentences of this book are worth quoting as summarizing his theory: "These laws, taken in the largest sense, being Growth with Reproduction; Inheritance, which is almost implied by reproduction; Variability from the indirect and direct action of the conditions of life, and from use and disuse; a Ratio of Increase so high as to lead to a Struggle for Life, and as a consequence to Natural Selection, entailing Divergence of Character and the Extinction of less-improved forms. Thus, from the war of nature, from famine and death, the most exalted object which we are capable of conceiving, namely, the production of the higher animals, directly follows. There is grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved."

Add the words "by chance," and you have Darwin's fundamental position. Christians are willing to admit development, but they object to his theory of chance. Darwin was hardly a materialist, but he furnished the ammunition the materialists needed. He was willing to attribute the "germs of life," from which the whole evolution proceeds, to God's creative action, on the lines of Deism, and admits that the laws were inbreathed by God, but afterwards everything simply happened fortuitously. He was never an aggressive sceptic, but he gradually lost faith in God and became an avowed agnostic. He persistently refused to admit any inner guiding principle in evolution, and though he admitted the difficulty of his theory of chance he never really gave it up. He is very frank in his letters. When he sent his book to Asa Gray in 1859 he wrote, "I fully admit that there are very many difficulties not satisfactorily explained by my theory."[1] About a year later he wrote to Huxley, "I entirely agree with you, that the difficulties on my notions are terrific."[2] When Lyell came over to his view Darwin was much reassured, and confessed in a letter to the new convert: "Thinking of so many cases of men pursuing an illusion for years, often and often a cold shudder has run through me, and I have asked myself whether I may not have devoted my life to a phantasy."[3]

In 1860, the year after the publication of the *Origin of Species,* Darwin had reached the stage of utter bewilderment: "I grieve to say," he writes to Asa Gray, "that I cannot honestly go as far as you

[1] Francis Darwin, *Life and Letters of Charles Darwin,* Vol. II, p. 13.
[2] *Ibid.,* p. 147.
[3] *Ibid.,* p. 25.

do about Design. I am conscious that I am in an utterly hopeless muddle. I cannot think that the world, as we see it, is the result of chance; and yet I cannot look at each separate thing as the result of Design."[4] And in an earlier letter of the same year he says: "I am bewildered. I had no intention to write atheistically. But I own that I cannot see as plainly as others do, and as I should wish to do, evidence of design and beneficence on all sides of us. There seems to me too much misery in the world. . . . On the other hand, I cannot anyhow be contented to view this wonderful universe, and especially the nature of man, and to conclude that everything is the result of brute force. I am inclined to look at everything as resulting from designed laws, with the details, whether good or bad, left to the working out of what we may call chance, not that this notion *at all* satisfies me."[5]

Darwin's theory applied only to the organic world and rested on the three principles of heredity, variability, and natural selection. Heredity is the biological law by which all beings endowed with life tend to repeat themselves in their descendants. It is for the species what personal identity is for the individual. Through it the groundwork remains unchanged amid incessant variations, and by it, according to Darwin, the acquired and advantageous characteristics are handed down by the parent to the young, though in this modern biologists do not generally support him. All living things tend to vary from the parental form slightly and fortuitously. Some variations are obviously of advantage to their possessors, and these useful variations are preserved by natural selection, and increased and developed through the generations that succeed in the long interval of time. Thus Nature takes the place of the selective human breeder and gradually produces the new species out of the varieties resulting from variation.

The struggle for existence arises from the fact that while the offspring always exceed the parents enormously in number, yet the total number of living organisms in the world does not and cannot increase year by year, the food supply being limited. Hence the vast majority of plants and animals die premature deaths. They kill each other in a thousand different ways; they consume the food of others and starve them, they prey on each other, they are destroyed wholesale by the powers of nature, cold and heat, rain and hail. The struggle to live is tremendously severe, because hundreds seek to live where there is only room for two or three. It is the Malthusian formula of population *vs.* food carried out in the terrible logic of reality. But why do some always survive? What gives them their peculiar privilege? If all were exactly alike we would say it was simply their luck. But they are not exactly alike. Some are stronger and healthier, fiercer to fight

[4] *Ibid.*, p. 146.
[5] *Ibid.*, p. 105.

or quicker to flee than others, and some are more cunning or gifted with keener sight, or protected by their shape and color from pursuers. Among plants the smallest differences may be useful; the earliest shoots grow strong before the slug attacks them, and bring forth seed earlier in the autumn. Plants armed with spines may escape being devoured, and certain kinds with bright flowers may attract insects and be fertilized sooner than others. A spot on the skin which is sensitive to light ultimately becomes an eye. Hard bumps appear on some cattle and develop into horns which are obviously useful. In the course of many droughts the necks of giraffes lengthen so that they can reach the leaves on the trees. Something must be left to "chance," but on the whole the fittest, those best adapted to their surroundings, will survive. On the other hand, some organs which are not useful are lost. Thus the beetles in Madeira are wingless.

Such is the Darwinian theory in brief. It is all very simple, as simple as that a round stone rolls down hill easier than a cube. Animals with certain advantageous variations have advantages over others. At the best the theory is based on mere analogy. Darwin passed from intelligent action of man directly to nature's blind killing off of unfavorable life forms. He speaks of "selection," but in reality in Nature intelligence and the isolating elements are absent. And the variations which he gives nature to work on are imperceptible, a difficulty which he seems to consider is overcome by assuming an infinitely long time for the process.

He is guilty of what might be termed a new logical fallacy, the fallacy of the imperceptible. He seems to think that if a thing grows slowly by minute gradations it needs no explanation, the process is its own cause. But no modification, however gradual, can begin a new line of growth, nor create even in germ that into which it is to develop. The smallest germ of an eye, a tiny nerve surface sensitive to light, is a new thing in nature when it first appears, and the environment could never produce it. It is from the first a potential eye, and all after developments simply carry on to perfect form the possibilities latent in that sensitive film. At times he seems to feel this difficulty, for he wrote to Asa Gray, "I remember well the time when the thought of the eye made me cold all over, but I have got over this stage of the complaint, and now small trifling particulars of structure often make me very uncomfortable. The sight of a feather in a peacock's tail, whenever I gaze at it, makes me sick!"[6] But still he refuses to admit any inner directing force causing the variations, as Gray and Lyell held.

The following is an example of how he argued in his first edition of the *Origin of Species* before sharp criticism made him strike out the

[6] *Ibid.*, Vol. II, p. 90.

last sentence. "In North America the black bear was seen by Hearne swimming for hours with widely open mouth, thus catching, like a whale, insects in the water. Even in so extreme a case as this, if the supply of insects were constant, and if better adapted competitors did not already exist in the country, I can see no difficulty in a race of bears being rendered by natural selection more and more aquatic in their structure and habits, with larger and larger mouths till a creature was produced as monstrous as a whale."[7] This led to a correspondence with Lyell in which he wrote, "Will you send me one line to say whether I must strike out about the secondary whale, it goes to my heart."[8] Two days later he wrote again, "I will certainly leave out the whale and bear."[9] A year later the matter is still weighing on him, and a sentence to Lyell shows that he had meant to illustrate by this the first step from bear to whale by natural selection, "Observe, that in my Polar Bear case, I do show the first step by which conversion into a whale 'would be easy,' would offer no difficulty!"[10]

The most obvious criticism is that imperceptible changes would not survive, for they would be too small to give any real advantage in the struggle for existence, nor would organs in the process of growth aid in the survival of the animal. But if any one supposes the variations large enough to be of real use, he passes at once beyond the Darwinian position. Even if the modifications were great in degree, but not a new departure in kind, the action of the environment could never *alone* produce the effect Darwin imagines. The wind might blow forever on a fin and never change it into a wing. No landing of fishes on the beach, no matter how many generations of them tried it, could ever modify them in the direction of reptiles. Tubercles chancing to appear on the sides would not develop into limbs, unless there was an innate tendency already present. Such a directive principle of development Darwin would not admit.

The Darwinian theory holds that variations must be useful in order to be selected, and that they are coincident with changes in the environment. Romanes in his earlier lectures admitted that a single clear case of a new organ slowly developing and of no use till perfected would be fatal to Darwinism. The Duke of Argyll pointed to the electric batteries in fishes, and Romanes frankly admitted the great force of the argument. All the while that the electrical apparatus was developing, it would require an enormous expenditure of nervous energy of no immediate use to the fish. How can we conceive on the principle of utility of such a change taking place in a single fish, or a few fishes? So

[7] First Edition, p. 165.
[8] Francis Darwin, *Life and Letters of Charles Darwin,* Vol. II, p. 30.
[9] *Ibid.,* p. 31.
[10] *Ibid.,* p. 129.

the Duke of Argyle held that many organs are prophetic of future use, therefore they are preserved. If organs change in the embryo when their change can only be of use after birth, they must have so changed in their philogeny, or race development, and the change must have been just as purposeful. Romanes gave up the position, and in his *Post-Darwinian Questions,* he argues that specific characters are often of no use whatever to the species, and quotes many modern evolutionists as on his side.

Bateson thinks more has been thrown on the environment than actual facts warrant. It has not changed *pari passu* with the "advantageous" variations, making them survive and the others perish. In fact the unmodified forms often survive and prosper as well. Many butterflies and other insects have shapes and markings which seem to mimic the leaves of trees, yet other species survive which do not have them. According to natural selection the latter ought to have been ruthlessly killed off. It is advantageous for the elator beetle to be able to spring into the air when laid on its back, but the other species also survive which are doomed to lie helpless because they lack this power to spring. Darwin admitted that this survival of old forms quite perplexed him, and he was never able to explain it on his view.

The crux of the whole problem is not the *survival* but the *arrival* of the fittest. Darwinism really accounts only for the non-survival of the unfit, but in no way accounts for the arrival of the fit. If we ask how the arrivals and survivals so fall together that an orderly system emerges from these chance variations, we get no satisfactory answer. The favorable variations are taken for granted, and we have only the truism that the fittest do survive. Are these numerous variations purely fortuitous? If so, we have a definite progression resulting from pure chance. But such a supposition defies the notion of law and fixed order on which all interpretation depends. All the facts point to a doctrine of descent, but not to the happy-go-lucky theory of the production of innumerable forms on which natural selection is free to work her wonderful transformations. The modern view is that the creation of a new species has already taken place before the question of survival comes up. Cope points out that "a selection cannot be the cause of those alternatives from which it selects. The alternatives must be presented before the selection can commence."[11] The question is whether it will be able to get a foothold. So far as a sentence can sum up the theistic point of view, we would say that species are not made by Darwinian methods, but are developed by immanent forces; and that natural selection has nothing to do with the origin of species, but concerns only the survival of those already formed.

[11] *The Energy of Evolution,* "Amer. Nat." Vol. XXVIII, p. 205.

Professor Kellogg in a careful study of the attack on Darwinism has this to say about his own position: "Finally I desire to add an objection that has real weight with me, whatever may be the personal attitude of other naturalists or students to it. And that is, that a constantly increasing number of working biologists find themselves, on the basis of their cumulative individual observation and experience and thought, unsatisfied with the explanation of adaptation and species-forming offered by selection theories. Men using, or rather, testing, these theories every day in their work in field and laboratory, find selection insufficient to explain the conditions that their observation and experiments reveal to them. These men are students in all the different lines of biological work; they are zoologists, botanists, paleontologists; they are students of anatomy, physiology, œcology (correlation of organisms), and taxomony (classification); they are embryologists, pathologists, animal and plant breeders. From all these lines of work come increasing complaints; selection cannot explain for me what I see to exist. From some the cry is more bitter: selection is a delusion and false guide; I reject it utterly. For me, I repeat, this is an objection of much significance and importance. Just as modern chemistry seems to be finding its long useful atomic theory now a restraint and a hindrance in understanding the wonderful new facts that have followed the pushing out of investigation into the rich fields of physical chemistry, so the biological experimentalists, the students of variation and heredity, of life mechanics, of physico-chemical biology, are finding the rigid theory of selection's control of all processes and phenomena a rack on which they will no longer be bound."[12]

Geddes and Thomson in their little book on evolution have a fair statement of the value of natural selection as at present understood: "Natural selection remains still a *vera causa* in the origin of species; but the function ascribed to it is practically reversed. It exchanges its former supremacy as the sole determinant among practically indefinite possibilities of structure and function, for the more modest position of simply accelerating, retarding or terminating the process of otherwise determined change. It furnishes the brake rather than the steam or the rails for the journey of life; or in better metaphor, instead of guiding the ramifications of the tree of life, it would, in Mivart's excellent phrase, do little more than apply the pruning-knife to them."[13]

The greater importance of variation has steadily come to the front, and is being carefully studied in the patient accumulation of the facts of variation. The greatest English worker on these lines, Bateson, writes: "All the different theories start from the hypothesis that the different forms of life are related to each other, and that their diversity

[12] *Darwinism To-day*, pp. 89, 90.
[13] *Evolution*, p. 248.

is due to variation. On this hypothesis, therefore, Variation, whatever may be its cause, and however it may be limited, is the essential phenomenon of Evolution. Variation, in fact, *is* Evolution. The readiest way, then, of solving the problem of Evolution is to study the facts of Variation." [14]

It is a common blunder to confuse Darwinism with Evolution. It is, of course, only a *theory* of evolution, but because it was first on the field, and was presented in a clear consistent form, it was rapidly caught up and generally accepted. It has become a lullaby to the popular mind, and its catch phrases are supposed to be a test of scientific orthodoxy.

The English evolutionists seem loath to depart entirely from the great pioneer. But on the Continent it is different. The students there are not bound to Darwin by patriotic ties, and the criticisms of him have been many and bitter. One of the most recent critics, Dennert, has published a little book with the significant title *At the Deathbed of Darwinism*. He gives a résumé of the views on the Continent against the Darwinian theory. Although too violent to make a good debater he proves his main thesis, which is set forth in his opening words: "Some twenty years ago it was perfectly justifiable to identify the ideas of Darwinism and the doctrine of the descent of man, for at that time Darwinism was the only theory of descent extant. The few who would not accept this could easily be numbered. Only occasionally a scholar, such as Wigand, Kölliker, Nägeli, and a few others dared to raise their voices in protest. Now all this has changed. Practically all naturalists now make a sharp distinction between Darwinism and the doctrine of descent. A survey of the field shows that Darwinism in its old form is becoming a matter of history, and that we are actually witnessing its death struggle. . . . The bulk of modern scientists no longer recognize it, and those who have not yet discarded it at any rate regard it as of subordinate importance. In place of this, older views have again come into acceptance, which do not deny development, but maintain that this was not a purely mechanical process."

There was another point in Darwin's theory which has not been dealt with above, namely that instinct is inherited habit. But inasmuch as this opens up the whole difficult question of what instinct is, it has seemed best to treat it in another note (Note K), which can most profitably be read after the study of Chapter V.

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[14] *Materials for the Study of Variation*, p. 6.

NOTE J

THE CELL AND ITS LIFE HISTORY

The cell is the unit of structure in all organic life. It consists of protoplasm, which is composed of cytoplasm and a nucleus. In the nucleus are tiny chromatin grains which seem to be the essential elements of the cell, and outside the nucleus in the protoplasm is a tiny body called the centrosome which functions in cell development. All other features in the cell can for our purposes be ignored. It is in cell division that we see most beautifully the working out of the inner laws. The division of cells is of two kinds; amitosis, or direct division, which is unaccompanied by any visible mechanism and is of rare occurrence, and mitosis, which is the almost universal form and therefore concerns us most. In mitosis the chromatin granules become arranged in a coiled necklace-like thread. This contracts, the granular origin becomes less evident, and the coils fewer in number, until it resembles a string. The string then breaks up into a number of U shaped chromosomes. This number is held to be constant for the cells of any given species of plant or animal, though the variation in number between the different species is very great. Meanwhile outside of the nucleus in the protoplasm the centrosome has divided into two, which move to the opposite poles of the nucleus. Radiations extend out from them into the protoplasm and, as the fine membrane of the nucleus disappears, the radiations invade the nuclear area, where they join the little fibers of that region and a continuous spindle is formed between the two centrosomes. The remaining radiations extending in all directions are called astral rays. The details of this process vary greatly in the different species. The chromosomes now arrange themselves in the equatorial plane of the spindle, and each splits longitudinally into two. This splitting is a reappearance of a division which has already been suggested in the chromosome string, or even in the chromatin grains themselves. The sister chromosomes now pass to the opposite poles of the spindle, and there adhere to each other end on end. In this manner the chromatin material of the nucleus is equally distributed into two parts. This continuous chromosome string lengthens out into the bead-like thread, and from that breaks up into the separate chromatin grains. The spindle and astral rays disappear, and new membranes surround the two new nuclei. At the same time the protoplasm of the old cell divides equally by simple constriction, and two perfect cells result out of the material of the parent cell. These then grow to full size and in turn set up cell division exactly similar to that by which they were formed. And so the process continues. The dominant life force holds the whole in harmonious interaction. Nor is this process

of division the only activity of the cell, for each cell illustrates all the phenomena of living things. It assimilates food, and even searches for it if it be a unicellular organism. It builds the food into material for its own substance and thus grows. It shows powers of respiration and excretion, and has the power of responding to stimuli.

But it is in the development of the germ cell that the dominant life force is most beautifully seen. Provision must be made so that when the two germ cells, male and female, come together the mingling of chromosomes does not yield double the number characteristic of that species. In the growth of most of the metazoa and in all the higher forms certain cells are set apart for reproductive functions. These are for the male small motile spermatozoa, and for the female large yolk laden ova. When the time for fertilization arrives these cells vary from the ordinary methods of mitosis, and by a process of reduction, too complicated to describe here, the male germ cell results in four spermatozoa, each carrying only half the typical number of chromosomes, while the female germ cell yields one large ovum, likewise with half the typical number of chromosomes, and three yolkless cells, which are abortive and necessarily functionless. When a spermatozoön penetrates the ovum the two nuclei mingle and a new cell results with the standard equipment of chromosomes made up by the joining of the paternal and maternal reduction chromosomes. After that cell division takes place as usual and a new individual is formed.

NOTE K

INSTINCT

Before proceeding to a discussion of the Darwinian and other views of instinct, it would be well to define what instinct is. Instinct is (1) an impulse in living creatures to perform certain definite actions for the good of their young or for their own protection, (2) which acts are repeated by each generation without change at certain points in their life under given circumstances, (3) without previous training, (4) without attempting any improvement, and possibly, (5) in unconsciousness of the purpose to which these acts are the means.

I. Darwin's view of instinct is that chance actions which happened to be of use to the creature were handed down to its descendants. A beneficial course of action better enabled the individual to survive, and was inherited and intensified by the use of future generations until it became ingrained in the species. That the theory hung on a slender thread Darwin saw, and wrote as the opening sentence of his discussion, "Many instincts are so wonderful that their development will probably appear to the reader a difficulty sufficient to overthrow my

whole theory." [1] To quote one of his illustrations: "Now let us suppose that the ancient progenitor of our European cuckoo had the habits of the American cuckoo, and that she occasionally laid an egg in another bird's nest. If the old bird profited by this occasional habit through being enabled to emigrate earlier or through any other cause; or if the young were made more vigorous by advantage being taken of the mistaken instinct of another species than when reared by their own mother, . . . then the old birds or the fostered young would gain an advantage. And analogy would lead us to believe that the young thus reared would be apt to follow by inheritance the occasional and aberrant habit of their mother, and in their turn would be apt to lay their eggs in other birds' nests, and thus be more successful in rearing their young. By a continued process of this nature, I believe that the strange instinct of our cuckoo has been generated." [2]

We are here asked to believe that the foster mother allowed the new and strange egg to remain in the nest through ignorance, or else we must suppose much cunning on the part of the cuckoo and great control over its physical organism, for it lays eggs much smaller than one would expect from its size, and gives them the color and markings of the eggs in the nest of the deceived bird. Often it lays them before nests in hollow trees which have the shape of a baking oven with a narrow entrance, and pushes them in with its beak. Here it is manifestly impossible for the cuckoo to see the eggs it is to simulate. Again how could a chance discovery of the benefit of freedom from maternal care affect the little bird in the strange nest? It would have no opportunity to copy its unnatural parent, and it could not very well reason out the advantage of a chance action which caused it to be reared in totally different surroundings than it had a right to. If Weismann be right about the non-inheritance of acquired characteristics this theory is destroyed completely.

Some parents perform their instinctive actions once only and could not, therefore, like Darwin's cuckoo, repeat chance actions which happened to result advantageously. There are some insects which lay their eggs on certain trees, and at once perish. A careful study of instincts shows them to be of such a character that they are necessary from the first. There is no room for chance. The lives of insects are too short for them to learn by experience. Besides it is inconceivable that the chance acts of a grub should be carried over from its larva state to its final butterfly or beetle state, and then be transmitted to the next generation of grubs. Chance actions in the beginning would never account for the wonderful corporate instinct which governs the work of a tribe of ants, or a hive of bees. Darwin's theory of fortuitous

[1] *Origin of Species,* Chap. VIII.
[2] *Ibid.*

variation meets its clearest defeat when attempting to explain the invariable, unerring, spontaneous manifestations of instinct.

II. Another view is that of G. H. Lewes, which has been elaborated by Eimer and others. This theory is that instinct is a sort of lapsed intelligence. Purposeful acts are repeated till the consciousness of purpose disappears and the acts are spontaneous. They become automatic and appear in the young as fixed habits or instincts. Ancestral experience is inherited as unconscious impulse. As Eimer writes: "If we suppose, for example, that the collection of honey has become mechanical, that the bees no longer reason consciously in performing this labor, yet we must assume that originally they began to collect honey from reflection and reasoning; for otherwise they would never have come to do it mechanically." [3]

This theory, like Darwin's, starts from actions being repeated so often that they become habits, and it is open to the same criticisms. In insect life there is no time for such repetition. The insect dies too early, and many of its acts are done but once. Intelligent purpose can hardly be postulated of an effort to prepare for a future state which the creature does not live to see, as when the parent wasp as soon as it has laid its egg provides food for the future young. Or again some forms of life provide for a metamorphosis of which they cannot possibly have any conscious prevision. The grub of the stag-beetle varies remarkably from the female larva in the manner of digging the hole in which its metamorphosis shall take place. The female hollows out a cavity just its own size, but the male digs a hole as large again, because it must provide for its horns when it becomes a beetle. Did conscious intelligence tell it that in the future state it would have horns, and did the female reason the other way? Von Hartmann shows the foolishness of such a view with his illustration of the life of the caterpillar of the Emperor Moth: "It devours the leaves of the shrub whereon it was hatched; at the most, moves when it rains to the underside of the leaf, and changes its skin from time to time; that is its whole life, which hardly allows one to look for even the most limited education of the intelligence. But now it spins its cocoon for the chrysalis state, and constructs for itself a double arch of bristles meeting at their apices, very easy to open from within, but which opposes to the outside sufficient resistance to any attempts to penetrate into it. If this contrivance were a result of its conscious understanding, it would require the following train of thought: 'I shall enter the chrysalis state, and, immovable as I am, be at the mercy of every adversary; therefore I will spin myself a cocoon. Since, however, as a butterfly I shall not be able to make a breach in the web either by mechanical or chemical means

[3] *Organic Evolution*, p. 425.

as many other caterpillars do, I must leave an aperture for egress; but that my persecutors may not make use of it, I shall close it with elastic bristles, which I can easily bend apart from the inside, but which will offer resistance externally, according to the theory of the arch.' That is really asking too much of the poor caterpillar! And yet each step of this argumentation is indispensable if the result is to be correctly got at."[4]

As far as the transmission of consciously acquired experience goes one has only to consider the large population of neuter insects among the bees to see how impossible the theory is. These neuters cannot produce their kind. Their special instincts and peculiarities have to be transmitted, not directly by an antecedent set of neuter insects, but by females, whose instincts and peculiarities are very different from those of the neutral portion of their progeny.

Insects today lack this ability to think out their actions, for if any unusual situation occurs the insect is confused and helpless. A certain species of wasp feeds her young ones from time to time with fresh food, visiting at suitable intervals the nest she has made. This she has carefully covered and concealed with earth, which she removes and replaces, as far as necessary, at each visit. If the opening be made ready for her, this, instead of helping her, altogether puzzles her, and she no longer seems to recognize her young, thus showing how thoroughly "instinctive" her proceedings are. Even animals of a higher grade of intelligence show this difficulty of meeting a new situation. Superficial resemblances easily fool them, just as the hen is fooled by a china egg. Dr. Jordan at one time had a lively Macacus monkey called Bob, which was a nut and fruit-eating monkey and instinctively knew just how to crack nuts and peel fruits. At the same time he had a pet monkey Mono of another kind that had the egg-eating instinct. But Mono had not yet seen an egg. To each of the monkeys Dr. Jordan gave an egg, the first that either of them had ever seen. Baby Mono, descended from egg-eating ancestors, handled his egg with all the expertness of instinct. He cracked it with his upper teeth, making a hole in it, and sucked out all its substance. Then holding the egg shell up to the light, and seeing there was no longer anything in it, he threw it away. All this he did mechanically, automatically, and just as well with the first egg as with any other he afterwards had. And all eggs since given him he has treated in the same way. But the monkey Bob took his egg for some kind of nut. He broke it with his teeth and tried to pull off the shell. When the inside ran out and fell to the ground he looked at it for a moment in bewilderment, then with both hands scooped up the yolk and the sand

[4] *Philosophy of the Unconscious,* Vol. I, p. 92.

mixed with it and swallowed it. Last of all he stuffed the shell into his mouth.

One mark of instinct is that the untaught young do as good work as the parents, and never improve on their first attempt. Birds which build new nests each year do not vary from their methods of former years. Spiders spinning their webs resemble automatic machines constructed to do one act supremely well. Nor does the creature ever make mistakes, no matter how complex the instinct.

Equally hard to explain is the migratory instinct of animals and birds. While it is still warm the birds fly south, certain animals go into winter quarters, and the beetles bury themselves in the ground. Yet the temperature may still be low when the birds and animals reappear. Von Hartmann discusses this question as follows: "In years when there will be an early winter, most birds of passage begin to make preparations for their departure sooner than usual. If a very mild winter is imminent, many species do not depart at all, or migrate only a short distance southward. If a severe winter occurs, the tortoise makes its winter abode deeper. If gray geese, cranes, etc., soon withdraw from the spots in which they had made their appearance at the beginning of spring, there is a prospect of a hot and dry summer, when the deficiency of water in those places would render breeding impossible to marsh and water birds. In years when floods occur, the beaver builds its dwelling higher; and in Kamchatka, when a flood is imminent, the field-mice suddenly withdraw in a body. If a dry summer is approaching, in April or May spiders weave their pensile toils several feet in length. When in winter house-spiders run to and fro, boldly contending with one another, construct new and numerous webs one over another, cold will set in in from nine to twelve days; on the other hand, if they conceal themselves, there will be a thaw.

"I do not by any means doubt, that many of these precautionary measures in view of future states of the weather are conditioned by a sensitive appreciation of certain present atmospheric states, which escape our notice; these perceptions, however, invariably have reference only to present states of the weather, and what can the common sensations produced by the present state of the weather have to do with the idea of the future weather? Surely no one will credit the animals with the power of *calculating* the weather months in advance from meteorological indications, and with the faculty of foreseeing floods. A mere feeling of this kind of present atmospheric influences is nothing more than the sensuous perception which serves as motive, for a motive must, indeed, always be present if an instinct is to become active. Nevertheless, it is certain that the prevision of the state of the weather is a case of unconscious clairvoyance; the stork departing for the south four weeks earlier than is customary, *knowing* as little as the

stag, which, when a cold winter is at hand, allows a thicker skin than usual to grow. Animals have in their consciousness a feeling of the present state of the weather; on this their action follows precisely *as if* they had the idea of the future state of the weather. They do not, however, possess the latter idea in their consciousness. Accordingly, there only remains as a natural connecting link the unconscious idea, which, however, is always a clairvoyant intuition, because it contains something which is neither directly given to the animal by sense-perception, nor can be inferred from the perception through its powers of understanding." [5]

The communal life of bees and ants is another interesting phase of instinct. Their nervous organism is extremely low. It would be absurd to think that they could initiate the wonderful series of actions on which the whole community depends. Each bee or ant has its special task and performs it unerringly, even though it cost its death. They have little or no consciousness of the meaning of what they do. The genius of the hive presides and dominates all its members, just as the organizing ψυχή dominates the developing of an egg or an embryo. Von Hartmann comments that "it rather looks as if an invisible supreme architect had laid before the assembly the plan of the whole, and had impressed it upon each individual; as if every kind of laborer had learnt his destined work, place, and order of affording relief, and was informed by some signal of the moment when his turn came. But yet all this is mere result of instinct; and as by instinct the plan of the whole hive indwells in each single bee in unconscious clairvoyance, so a common instinct urges each individual to the work to which it is called, at the right moment; only by such means is the wonderful quiet and order possible." [6]

III. *Theistic Conception of Instinct.* Both Schopenhauer and Von Hartmann are strongly against the mechanical or materialistic view of nature, but their general teaching rules out any divine implanting in the theistic sense. Kant had deeper insight, for on one occasion he said, "Instinct is the voice of God."

The evolution of an organism from the germ takes place by epigenesis, an inner process which consists in the application of a definite force or tendency, so as to build up particular tissues and organs. The force is not applied at random, it is controlled by what the Germans call *Gattungsidee,* the Idea of the Species. If we admit a divine plan determining the physical structure of an organism, why should we not believe that it determines also psychical features? It would therefore be inwrought into the very structure of the animal, and be independent of anything like Natural Selection. Instinct is a divinely ordained pre-

[5] *Ibid.,* Vol. I, pp. 101–103.
[6] *Ibid.,* p. 112.

adjustment of the inner life-processes of an organism to its special needs and environment. As Von Hartmann remarks, the *Gattungsidee* of each species of bird includes the special fashion of its nest and the notes of its peculiar song, just as much as the fashion of its plummage, the structure of its skeleton, and the characteristics of its beak and claws. In either case, an idea is to be realized, a purpose is to be carried into execution, and this is the proper function of will and intellect combined. The preservation of the animal's life, the choice and collection of its appropriate food, the continuance of its species, the care of its young, the building of its home, the fit period for its annual migration and the proper direction of its flight, are all tasks performed by its own voluntary efforts, under the guidance indeed of a wisdom immeasurably higher than its own, but through the conscious use of its own organs and muscular powers, which are brought into play by a vague impulse, a blind craving, urging it to attain some useful end of which the creature itself possibly knows nothing.

Only on the supposition of a Power immanent in and directing the universe can we understand the strange powers of instinct. Along with organic evolution this divine Spirit has caused an associated psychical evolution. Instinct in the lower orders of creation yields more and more to intellect in the higher orders, until the goal is reached in the mind of man, whose instinctive acts are very few indeed.

NOTE L

FISKE ON LAW OF SUFFICIENT REASON

Fiske, in his *Cosmic Philosophy,* follows the lead of Mill. He thinks the law proves too much. If we make the First Cause responsible for everything, then it must partake of the qualities of all creation. "If it reasons and wills, like the higher animals, it must also, like minerals, plants, and the lowest animals, be unintelligent and unendowed with the power of volition."[1] It would also have to be material, because the created object is material. For instance, if a piece of matter were gifted with momentary intelligence sufficient to enquire into its own cause, would it not argue, I am material, therefore my maker is also material? Perhaps it would; but it would more likely say first, I think, therefore my Maker must also think. But if it could really think as men think it would also realize the superiority of mind to matter and their utter dissimilarity, and would see that the logical law would not require God to have a body, because spirit and body exist in different planes.

[1] *Cosmic Philosophy,* Vol. II, pp. 388, 9, and Part III, Chap. 2.

NOTE M

KANT ON THE TRIBUNAL OF CONSCIENCE

"The consciousness of and internal *tribunal* in man (before which 'his thoughts accuse or excuse one another') is conscience. Every man has a conscience, and finds himself observed by an inward judge which threatens and keeps him in awe (reverence combined with fear); and this power which watches over the laws within him is not something which he himself (arbitrarily) *makes,* but it is incorporated in his being. It follows him like his shadow, when he thinks to escape. He may indeed stupify himself with pleasures and distractions, but cannot avoid now and then coming to himself or awaking, and then he at once perceives its awful voice. In his utmost depravity he may, indeed, pay no attention to it, but he cannot avoid *hearing* it.

"Now this original and (as a conception of duty) moral capacity, called *conscience,* has this peculiarity in it, that though its business is a business of man with himself, yet he finds himself compelled by his reason to transact it as if at the command *of another person.* For the transaction here is the conduct of a *trial* (*causa*) before a tribunal. But that he who is *accused* by his conscience should be conceived as *one* and *the same person* with the judge is an absurd conception of a court; for then the complainant would always lose his case. Therefore in all duties the conscience of the man must regard *another* than himself as the judge of his actions, if it is to avoid self-contradiction. Now this other may be an actual or a merely ideal person which reason frames to itself. Such an idealized person (the authorized judge of conscience) must be one who knows the heart; for the tribunal is set up in the *inward part* of man; at the same time he must be *all-obliging,* that is, must be or be conceived as a person in respect of whom all duties are to be regarded as his commands; since conscience is the inward judge of all free actions. Now, since such a moral being must at the same time possess all power (in heaven and earth), since otherwise he could not give his commands their proper effect (which the office of judge necessarily requires), and since such a moral being possessing power over all is called God, hence conscience must be conceived as the subjective principle of a responsibility for one's deeds before God; nay, this latter concept is contained (though it be only obscurely) in every moral self-consciousness."[1]

[1] *Tugendlehre,* p. 293 ff, Abbott's translation, pp. 321–2.

NOTE N

THE USE OF THE IMAGINATION

We must recognize the part played by the imagination in our appreciation of the beautiful. The imagination is a form of insight, and one of the elements of faith. "It is that which made Socrates, even with little scholarship, and Bunyan, with no scholarship, *God's seers* — adepts in a wisdom which mere learning could not impart." The imagination has an interpretative power through the use of mental images which we form of the works of Creation. It is also a power of expression, for the mind which has mastered moral and spiritual meanings gives them forth by imagination to other minds clothed in fitting forms and figures. Few essays are so full of meaning as Bushnell's *Our Gospel a Gift to the Imagination.*

The modern prosaic religion of the West is apt to take offense at the emphasis we lay on the devout imagination as the needed handmaid to faith. It seems to many that we are denying the reality of the things eternal which are unseen. On the contrary, it is the imagination which reveals them as spiritual realities and not mere fancies. Without this instrument the prophet poets would be helpless to express in living words their visions of things divine. It is the deep insight of the devout imagination which creates the symbols and pictures which glorify the visions of the psalmists and of prophets like Isaiah, Ezekiel, and St. John the Divine in his Book of Revelation. When advancing years have taken away from us our childish faith in the letter, it is the blessed function of spiritual imagination, awakening our spiritual insight to strengthen and recreate our faith again in forms and thoughts which never pass away, and which uncover the world of spirit as a certain refuge from the dogmatism of the logical faculty and the denial of the senses.

The Victorian poets and especially the great prose poet, John Ruskin, made this line of thought familiar and helpful to the devout lay-mind long before it affected the clerical mind. Ruskin's main point is the distinction he draws between the creative and the penetrative imagination. The creative imagination literally imagines, *i.e.,* makes images or pictures out of its own interior mass of thoughts, which have no existence in the world of fact. The penetrative imagination always faces some given outer object or scene in whose hidden depths it sees divine symbols, things high and holy beyond the reach of the senses, but certain to the heart. Ruskin's two forms of the imagination correspond to the German words *Einbildung* and *Anschauung,* which last implies insight.

On the same line wrote Goethe: "The beautiful is the perfect union

of the Idea and the Form which I perceive through my imagination. It is not correct to speak of a passive perception of the beautiful. Every time I perceive beauty it is the imagination which plays upon it and arouses the delight it gives."

NOTE O

THE ONTOLOGICAL ARGUMENT ANALYZED

I. Ontology Proper — God as Real Being the Cause of Existence

No term is so suggestive of wearisome metaphysics as Ontology; but in its proper connotation it simply expresses the revealed name of God, *I am that I am,* spring and support of all existence. Never has the intuitive ontological faith found nobler expression than in the majestic words of the Psalmist, "Lord, Thou hast been our dwelling-place in all generations! Before the mountains were brought forth, or ever Thou hadst formed the earth and the world, even from everlasting to everlasting, Thou art God." But, unfortunately, under the prevailing intellectualism philosophic believers commonly expressed this intuitive faith in terms of the head only, and the metaphysical discussion revolved in sluggish circles around dreary abstractions, The First Cause, Necessary Being, The Infinite, The Absolute, such as no heart of man ever believed in.

Although an element in all philosophy, Anselm (1033–1109) was the first to formally develop this faith of the spirit in Infinite Being on its religious side. He did not separate it in thought from the ethical form. The *Ens Realissimum* must ever be the *Ens Perfectissimum.* He did not argue on the abstract lines of Clarke or Gillespie, nor undertake, as is often foolishly supposed, to prove the existence of God to atheists by the quibble that the mere idea of a thing involves its actual being. His *Proslogion* is a meditative prayer, not a syllogistic treatise, and its sub-title, *Faith seeking to understand itself,* shows that he intended to clarify man's instinctive belief. He wrote to confirm, not to create, faith in God. Hence the unfairness of the common summarizing of his whole thought in the cold syllogism: We have an idea of a Perfect Being so great that none greater can be conceived; Existence is an attribute of perfection: Therefore, the Perfect Being exists. Such an argument has no force for doubters. If this were his reasoning, then the objection is valid that you can not prove the existence of a thing from the idea of it. But Anselm rightly insisted that the idea of God was *sui generis,* not a mere thought of the understanding, but the direct intuition of divine reality. He spoke as a man of faith to men

who had some faith at least, and appealed to the instinctive feeling that the phenomenal world, and especially our own selves, can not hang in the air, but *must* be rooted in necessary and eternal Being. It is this subjective element of a living faith which alone gives cogency to this somewhat awkward dialectic, and the lack of it in many readers explains their utter misunderstanding of his position. In the *Monologion* he writes: "The rational mind alone among created things can rise to the search after God, and it alone can find traces in itself of that which it seeks. . . . We may say of the soul that it is to itself a mirror wherein it beholds the image of Him whom it can not behold face to face." [1]

Anselm's postulate was that God exists so truly that He cannot be thought not to exist. He quoted the verse in the Psalms, "The fool hath said in his heart, There is no God," [2] to show that only a fool could make such a statement, for either he does not know the real meaning of the word "God," in which case he is foolish to say anything at all, or he does know its meaning, and in that case he is logically a fool, for he affirms a contradiction in terms, since "God" means the universal ground of Being, and the fool's remark would therefore be "Existence does not exist." When Gaunillo replied in the name of the fool, that he could imagine a perfect island, more beautiful than any in the world, but that it would not have any real existence, Anselm pointed out that his line of thought was applicable only to the one "idea," which we call God, a necessary idea which carried with it the conviction of its reality, "because it exists on an assured ground of truth, otherwise it would not exist at all." [3] Convinced that God is not a mere name, or thing or creature, but the Ground, the necessary Being, without which there could be no world-order, Anselm retorts as to the island, "I reply confidently that, if any one will find for me any object whatever, existing in reality or in the mind alone, to which the reasoning of my argument is applicable, besides that one Being *quo majus nihil,* I will pledge myself that I will find for him that lost island, and will secure it to him so that it will never be lost again." [4]

Descartes' position also has been misunderstood as purely logical, on the line of the sufficient reason — the innate idea of God implies Deity as its (external) cause. But underlying the language which suggests this interpretation is ever the conception (unfortunately seldom clearly expressed) that the idea is itself a dim but immediate intuition of God. In the *Third Meditation,* he reasons: I have within me the idea of infinite substance, because I am myself a substance, that is, real

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[1] Chaps. 66 and 67.
[2] Ps. 14:1.
[3] *Liber Apologeticus contra Gaunilonem,* Chap. 3.
[4] *Ibid.*

though finite being. I could not possibly imagine such an idea, if God were not a reality, its ground and cause, for experience alone could never give it. It is the mark impressed by the maker on his work, but the mark need not be different from the work itself (spirit is made of spirit and knows its source as spirit). God in some way fashioned me in His own image and likeness, and I perceive this likeness, in which is contained the idea of God, by the same faculty by which I apprehend myself (*i.e.*, not by inference, but immediately).

The older metaphysical statement of the ontological argument (*e.g.*, by Clarke and Gillespie) is of little value to ordinary minds. Much more effective is the recent affirmation by many men of science, on the ground of consciousness alone, of the certainty of Infinite Reality, even if they do define the unknowable only in terms of force. Herbert Spencer writes that the persistence of force is an ultimate truth of which no inductive proof is possible. "Deeper than demonstration — deeper even than definite cognition — deep as the very nature of mind is this postulate. . . . Its authority transcends all others whatsoever; for not only is it given in the very constitution of our own consciousness, but it is impossible to imagine a consciousness so constituted as not to give it." [5] We welcome such ontological reasoning, though it is fatal to Spencer's sensational philosophy.

II. Rational Ontology — God as Supreme Reason

The "substance" form of ontological thought, which has just been treated, is closely related to the cosmological argument, and similarly the rational form is closely related to the teleological argument. In each case the difference is that between an inner conviction and a logical inference. Rational ontology is well expressed by Goethe: "I do not ask whether the Supreme Being has reason and understanding, for I feel that He is understanding and reason itself. Therewith are all creatures permeated and man has so much of it that he can apprehend in part the Highest Being Himself." This aspect is not as commonly felt as the preceding, appealing as it does mainly to minds of a mystical or idealistic tendency. We cannot even imagine vast power existing and acting without thought or consciousness. Descartes' maxim holds good of every form of real existence — *Cogito, ergo sum,* not *Sum, ergo cogito,* for mere existence may be "matter" only. The rational form of ontology underlies the Bible passages in which the universal order is expressed in terms of thought and the emphasis falls on the Divine mind or wisdom, and especially underlies the New Testament doctrine of the Logos. The Bible symbol of inner reason is light.

Two lines of experience confirm the certainty of a universal Mind:

[5] *First Principles,* 1st Edit., § 76.

(1) the manifestation in the Cosmos of a definite order and relations and laws which prevail not only on earth but in farthest space — the same everywhere. (2) the fact of a common mind in man with intuitions and judgments of the same kind among all the diverse races of men. This implies a common source in the divine Logos.

This thought of a common Reason in all minds was the most vital discovery of the earliest Greeks. From the first their thinkers felt it had a spiritual aspect; universal truths must have their origin in the realm of the divine. Hesiod speaks as a rational ontologist when he says: "The truth proclaimed by the concordant voice of mankind fails not, for in man speaks God."[6] Heraclitus also enforces the same thought: "To speak rationally it behooves us to derive strength from that which is common to all men. For all human understandings are nourished by the One Word or Reason of God, whose power is commensurate with His will, and is sufficient for all and overfloweth."[7]

The *Book of Proverbs* thus personifies the Divine Logos or Wisdom:

> "Jehovah possessed me in the beginning of his way,
> Before his works of old.
> I was set up from everlasting, from the beginning,
> Before the earth was.
> When there were no depths, I was brought forth,
> When there were no fountains abounding with water.
> Before the mountains were settled,
> Before the hills was I brought forth;
> While as yet he had not made the earth, nor the fields,
> Nor the beginning of the dust of the world.
> When he established the heavens, I was there:
> When he set a circle upon the face of the deep,
> When he made firm the skies above,
> When the fountains of the deep became strong,
> When he gave to the sea its bound,
> That the waters should not transgress his commandment,
> When he marked out the foundations of the earth:
> Then I was by him, as a master workman;
> And I was daily his delight,
> Rejoicing always before him,
> Rejoicing in his habitable earth;
> And my delight was with the sons of men."[8]

This passage finds its echo in the *Wisdom of Solomon,* where the writer says, "For she that is the artificer of all things taught me, even wisdom."[9]

The Church Fathers often wrote from this point of view. Cyril of

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[6] *Works and Days.*

[7] Fragment of Heraclitus preserved by Stobaeus. See Coleridge, *Statesman's Manual,* Appendix D.

[8] Prov. 8:22–31.

[9] Wisdom 7:22.

Jerusalem: "The wider our contemplation of Creation the grander is our conception of God."[10] Basil: "The more profoundly we penetrate the laws on which the universe is founded and sustained the more do we behold the glory of the Lord."[11] Gregory the Great: "The wonders of the visible creation are the footprints of our Creator; Himself as yet we cannot see, but we are on the road that leads to vision, when we admire Him in the things which He has made."[12] Thomas Aquinas writes still more definitely: "All intellectual knowledge comes from the Divine Intellect . . . and is caused by the Word Who is the reason of the Divine Intellect." "God acts continually within the soul, in the sense that He creates and guides its natural light." Augustine, in the spirit of the later Anselm, declared, "I have on the side of faith the authority of Christ, from which nothing shall part me. But as to what my reason can attain, I am determined to possess the truth not only through faith but through intelligence."

We meet with this form of ontology in early Neo-Platonic and modern Neo-Hegelian writers, and in mystics and poets in whom the intellectual element is strong. The French Mystics Fénelon and Malebranche sought to know God on the side of reason as well as feeling, differing here widely from their contemporary, Pascal.

Our consciousness of an inner world of thoughts all related in certain definite ways, brings with it the conviction that this logical order is necessary — is the fundamental condition of all thinking. We feel the certitude and universality of logical and mathematical principles; they must form the working laws of any mind. Given a mind which knows itself it would feel this *a priori,* and as soon as outer experience clearly begins, it would find this faith justified in the existing world which is framed and ordered according to the very laws it finds in itself. The mind in us which interprets nature as a rational system must be in essence one with the universal Mind which constituted that order. Modern science rests definitely on this principle. Helmholtz declared, "There is only one piece of advice for the scientific student, trust and act"— that is, on the presupposition that the universe is a rational cosmos. The argument has had a clear statement by Pfleiderer: "The agreement, therefore, of the ideal laws of thought, which are not drawn from the outer world, and the real laws of being, which are not created by our thought, is a fact of experience of the most incontrovertible kind; the whole certainty of our knowledge rests on it. But how are we to account for this agreement? There is only one possible way in which the agreement of our thought with the being of the world can be made intelligible: the presupposition of a common

[10] *Cat.* IX:2.
[11] *In Ps.* XXXIII.
[12] *Mag. Moral.* XXVI:12.

ground of both, in which thought and being must be one; or the assumption that the real world-ground is at the same time the ideal ground of our spirit, hence the absolute Spirit, creative Reason, which appears in the world-law on its real, in the law of thought on its ideal side. . . . In modern times this thought forms the foundation and corner-stone of speculative philosophy." [13]

No real knowledge of the world outside would be possible or even conceivable, if there were not an established harmony between man and his dwelling place, between subject and object; for our knowledge is knowledge of relations between things, and these relations — the world-order — are intelligible, written as it were in a language we understand. It is the product of mind and speaks to mind, both being of the same kind, though differing in degree. We could not know anything whatever, were there not a receptivity for each truth already in our minds, if we were not at home in the world, if the mind of man were not microcosmic, mirroring the macrocosmic. But no mind which holds this point of view can believe for a moment that "mind" is found only in the microcosmus. It goes without saying that a Mind prior to our own, and to the world, must have called both into existence.

The thinker as distinct from the scientific observer does not hesitate to hold this view. "I cannot help discovering in the universe an all-pervading reason," exclaims Max Müller. No chance "will account for the *Logos*, the thought, which with its thousand eyes looks at us through the transparent curtain of nature and calls for thoughtful recognition from the *Logos* within us." [14]

Lotze clearly expresses the idea of the fundamental unity of human reason. "In the mental life of the human race there are such immense differences that one might almost doubt whether amid the variety there really were at bottom any common measure. Yet we believe that there might be found certain definite features, characteristic modes of working, which, occurring in all human souls, bring them together into a common class. . . . This common and indestructible feature of the human mind consists in the Idea of valid and binding Truth and the sense of Universal Right and a Universal Standard by which all reality must be tried. . . . The same impulse appears again in language which, however poor it may be, is never a mere collection of exclamations in which disturbance of mind has sought an outlet. All language bears the impress of a universal and sovereign order, according to which the relations of things have inherent connection. . . . If we choose to sum up under the name of the Infinite that which stands opposed to particular finite manifestations, we may say that the capacity of becoming conscious of the Infinite is the distinguishing endowment of the

[13] *Religionsphilosophie*, Vol. III, p. 274 (Eng. trans.).
[14] *Nineteenth Century*, Dec. 1894.

human mind, and we believe that we can at the same time pronounce, as a result of our considerations, that this capacity has not been produced in us by the influence of experience with all its manifold content, but that having its origin in the very nature of our being, it only needed favoring conditions of experience for its development." [15]

The earliest English representatives of rational ontology are the Cambridge Platonists. It should have been the philosophy of Berkeley, but he was too much under the influence of John Locke to appreciate its ontological basis — mind speaking directly to mind. This theistic Idealism has many able advocates, among them, T. H. Green, Illingworth, Royce, Geo. Matheson, and the two Cairds. In America its best representatives are Samuel Harris and Professor B. P. Bowne.

III. Ethical Ontology — God as Perfection

This form of ontological faith is essentially reverence for what is holiest, confidence in what is noblest, trust in what is highest. Men have ever felt that God speaks most directly through the heart. As finite phenomena suggest an infinite, unchanging cause and ground, so does our moral life, imperfect in will and deed, bear witness to a moral reality in which our imperfections disappear and our ideals are realized. We cannot help believing that our highest and purest conceptions of righteousness and love must have their foundation in the very nature of real being. Man cannot conceive a nobler character than actually exists or think ethical thoughts higher than any in his Maker. Our highest faiths cannot be "too beautiful to be true"; rather they must be true, because they are so beautiful. The moral ideal must have reality.

This is the simplest and most credible form of Ontology. We, in Christian lands, naturally think of God, not as the primal Source of Existence or as the Supreme Reason, but as the Supreme Goodness and Love. In this ethical realm convictions rule, not inferences or syllogisms, and they have a certainty which no reasonings ever have. We do not justify our moral judgments by any arguments; we are simply so constituted that we must ascribe worth, ethical values and obligation to certain feelings, thoughts and relations and, furthermore, we connect them intuitively with God as their source. This thought of God as the moral Ideal appeals to the strong ethical feeling of our age. Not as many thinkers accept Hegel's dictum, "The rational is the real," as accept the ethical maxim, "The moral is the real." If it is not so, if our purest and best ideals and hopes have no foundation in reality, if the ultimate root of the universe is not true and good and loving, then ethical life — distinct from mere prudence — is sapped at

[15] *Microcosmus,* Vol. I, Bk. V, Chap. 5, end.

the foundation. Plato and Aristotle realized this. The former said that man is good by a certain inspiration of the gods. In the *Republic* he asks: "Is it not the noble which subjects the beast to the man, or rather to the god in man, and the ignoble that which subjects the man to the beast?"[16] Pascal says, "There is a logic of the heart of which the intellect knows nothing."[17] And Tyndall with a touch of wistful pathos, for he could not bring himself to trust his heart, wrote, "Round about the sphere of the intellect, sweeps the grand horizon of the emotions, from which arise our noblest impulses." This logic of the heart may be stated in terms of what we may call spiritual induction, a swift rising from many vivid particular experiences to a universal conclusion, certified by its own self evidence. The Schoolmen called this *Via Eminentiae,* and Plato summarized it in *The Laws:* There are in us certain virtues, but God possesses all virtues. We cannot do some things, He can do all things. In us there are both good and evil impulses; in God there is naught but Good, and that in perfection.[18] Leibnitz wrote briefly: "The perfections of God are those of the soul raised to Infinity," and Secretan still more briefly, "Perfection is eternal." Spinoza declared, "I regard reality and perfection as synonymous terms."[19] John Stuart Mill expressed his faith that "even the most sceptical of men generally had an inner altar to the Unseen Perfection while waiting for the true one to be revealed to them."[20]

Thinkers of the most diverse types have ever felt the convictive force of this certitude of duty and the beauty of holiness. Hooker in majestic words proclaimed its broad reality, that eternal law has its seat in the bosom of God.[21] Butler in the Introduction to his *Analogy* remarked: "Our whole nature leads us to ascribe all moral perfection to God, and to deny all imperfection in Him. And this will forever be a practical proof of His moral character, to such as will consider what a practical proof is; because it is the voice of God speaking in us." (But he ignores this ethical line of thought in the body of the work, confining the ontological argument to a brief statement of God as Necessary Existence.) Even Hume, truly a Saul among the prophets, once admitted that nature has given us a strong passion for what is excellent, and that the Deity possesses these attributes in a remarkable degree. Recently Sir Oliver Lodge has written: "No one can be satisfied with conceptions below the highest which to him are possible: I doubt if it is given to man to think out a clear and consistent system higher and

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[16] Bk. 9.
[17] *Thoughts,* IX:19 and elsewhere.
[18] Bk. 10.
[19] *Ethics,* Pt. II. Def. 6.
[20] *Life of Francis P. Cobbe,* Vol. II, p. 416.
[21] *Ecclesiastical Polity,* End of Bk. I.

nobler than the real truth. Our highest thoughts are likely to be nearest to reality; they must be stages in the direction of truth, else they could not have come to us and been recognized as highest. So, also, with our longings and aspirations toward ultimate perfection, those desires which we recognize as our noblest and best; surely they must have some correspondence with the facts of existence, else they had been unattainable by us."[22] This thought is identical with Anselm's: "If any mind could conceive anything better than Thou art, O God, then the creature would ascend above Thee and become Thy judge, which is utterly absurd."

Prophets and poets ever make their appeal direct to this witness of the soul. They do not argue but proclaim in glowing words and with fervent conviction, what God *must* be, and the hearts of men, wise and simple, respond joyfully to the revelation, confirmed within by a voice they do not question. For men cannot help believing that the highest conceptions of Right and Good must have a foundation in the nature of things, they cannot be mere notions in their own minds, they bear their own convincing witness to their divine reality. Tennyson bade us:

"Speak to Him thou for He hears, and Spirit with Spirit can meet —
Closer is He than breathing, and nearer than hands and feet . . .
And the ear of man cannot hear, and the eye of man cannot see:
But if we could see and hear, this Vision — were it not He?"[23]

This is the spirit of the child. In every great genius there is such trust, which bids him have faith — faith that whatever good *may* be, *must* be. It feels that in the nature of things its finite experiences cannot exhaust moral qualities, that somewhere, somehow, they must exist perfectly in infinite terms. Love must be eternal, truth must prevail, power must be unbounded, right must rule, knowledge must be unlimited, finite "place" be swallowed up in infinite "space," and time pass into eternity. This is the logic of the heart.

> "God is all wise, all powerful, all good!
> All wise and, therefore, knoweth what is best;
> All good and willeth, therefore, what is best;
> All powerful and *can*, therefore, what is best;
> And if He can, why *must*."

The gentlest character in Greek tragedy, loving Antigone, makes her appeal from man's inhumanity to heaven's law within the heart, to the

> "Unwritten and enduring laws of God,
> Which are not of today, nor yesterday,
> But live from everlasting, and none breathes
> Who knows them, whence begotten."[24]

[22] *Life and Matter*, p. 82.
[23] *The Higher Pantheism.*
[24] Sophocles, *Antigone.*

Iphigenia shrinking in horror from the cruel death on the altar at Aulis holds fast her faith, "I do believe the gods can do no wrong." And Goethe, in his tale of her at Tauris, makes her justify that faith to Thoas, the King, who had told her, "'Tis not the voice of God, but thine own heart that speaks," by the profound words, "'Tis only in our hearts that God does speak."

This was the experience of Frances Power Cobbe, who had through doubt given up her early religious beliefs and lost faith in the Bible which was once her constant guide. She describes the slow winning of her way from Deism to Theism. Among other mile-posts in her difficult progress was the following incident: "After a time, occupied in part with study and with efforts to be useful to our poor neighbors and to my parents, my Deism was lifted to a higher plane by one of those inflowings of truth which seem the simplest things in the world, but are as rain on the dry ground in summer to the mind which receives them. One day while praying quietly, the thought came to me with extraordinary lucidity: 'God's Goodness is what *I mean* by Goodness! It is not a mere title, like the "Majesty" of a King. He has really that character which we call "Good." He is just, as I understand Justice, only more perfectly just. He is Good as I understand Goodness, only more perfectly good. He is not good in time and tremendous in eternity; not good to some of His creatures and cruel to others, but wholly, eternally, universally good. If I could know and understand all His acts from eternity, there would not be one which would not deepen my reverence and call forth my adoring praise.' To some readers this discovery may seem a mere platitude and truism: the assertion of a thing which they have never failed to understand. To me it was a real revelation which transformed my religion from one of reverence only into one of vivid love for that Infinite Goodness which I then beheld unclouded."[25] This faith was fixed and certain, and never lost. In all such cases the appeal is made to the faith of the heart as sufficient in itself. As Goethe puts it:

> "There is a universe within,
> The world we call the soul, the mind:
> And in this world what best we find
> We stammer forth, and think no sin
> To call it God, and our God, and
> Give heaven and earth into His hand,
> And fear His power, and search His plan
> Darkly, and love Him, when we can."[26]

This direct appeal to the heart's instinctive faith in God's Perfection, interpreted in terms of the conscience, is more general today than

[25] *Life of Frances P. Cobbe,* Vol. I, pp. 84, 5.
[26] *Gott, Gemüth und Welt,* Blackie's translation.

formerly, when some forms of theology made, not love and fatherhood, but power and sovereignty the determinative elements in the Divine Nature. The nobility of the moral ideal of many poets and ethical writers outside the Christian church makes this line of thought vitally important to the Christian preacher. It was the secret of Phillips Brooks' success, his power of impressing vast audiences. He proclaimed what his own high spirit beheld and believed in the noble conviction that his fellows were capable of the same visions of truth, and his enthusiastic faith in his message and in the capacity of his hearers to receive it, did open their eyes to see what he saw, making them feel he was only describing thoughts and feelings in their own souls, to which they could give no utterance. Leaving to the sceptics and the cynics, always plentiful enough, the dreary work of quibbling and doubting, he touched with magnificent power the chords of hope and faith which lie latent in every human heart, and awoke them to music.

The Ritschlian theology of today, which denies the intellectual arguments and every other form of ontology, rests its whole case on our ethical faith in God. In this it follows Kant, who, outgrowing the scepticism of the Pure Reason, found rest and certitude in a teleology and ethical faith, conceived ontologically as a divine purpose for good, as the basal reality, hidden from the intellect but perceptible to the heart. In his last critique, that of Judgment, he defines faith as the moral attitude of the Reason toward beliefs which lie beyond the reach of intellectual proofs. Our consciousness must assume as true and real all the conditions presupposed in the voice of duty and needed for our ethical development. Moral teleology is the certainty which the Practical Reason has of a moral purpose or design in the Universe, the belief that it was made for moral beings by a Moral Being. When a man looks within himself and is conscious at once of his own freedom and of the law of duty as universal, he feels that this inner world is the *real* world, higher than the physical, whose ground of existence is secondary to mind and conscience. We feel in our hearts that a *good-will* is the one "good thing" in the world; it is that alone which gives moral, absolute worth to a man, and hence the only conceivable aim of creation is to produce such good-wills, to develop and perfect moral agents of the highest character. It is a fundamental thought, to which even the commonest human mind must give immediate assent, that the final purpose of the Universe, suggested *a priori* by the Practical Reason, can be no other than man, *i.e.*, a rational being, existing under moral laws. For every one feels that, if the world consisted only of lifeless things, or even of living but not rational beings, its existence would have no worth, because in it there would be no beings who have the least idea of what worth or character is. Consequently we must assume that there is a moral World Cause in order to set before our-

selves a final purpose consistent with the moral law. For man alone gives moral worth to the world and we cannot conceive a cause adequate to produce the world which would act without a moral motive. This moral teleology completes the full concept of the Divine.[27]

This line of thought or feeling, Kant warns us, is not a demonstration of God. It is valid only for the man whose conscience is awake, and who feels the supreme and eternal value of ethical life. For such a man it is sufficient.

NOTE P

ETHICS OF PANTHEISM

Spinoza handles his ethical principles in the same mathematical way along the lines of rigid determinism as he does his philosophical principles. His system has many points of affinity with Roman Stoicism, which also laid great stress on ethics. Spinoza's God has close analogy with the *anima mundi* of the Stoics. But he was not the slave of his own intellectual system, but followed at times mystical lines of thought and faith logically inconsistent with his theory, even implying intuition as a power of the understanding and a certain vague immortality through the intellectual love of God. He shows deep spiritual insight and sincere reverence for holy things so that his *Ethics* and *Treatise* are written on a high plane. Discovered by Herder, Lessing, and Goethe, his influence became a potent factor at the end of the eighteenth century in the awakening of German literature and theology to more spiritual conceptions of life and religion. The best representatives of this side of his teaching, which we may call "ethical agnosticism," are Fichte, Schelling, Carlyle, and Matthew Arnold.[1]

Thus Fichte holds that the living and active moral order is itself God. But we must not assume any cause for this order, for if we assign it to a particular Being, he must be distinguished from ourselves and the world, and thus personality would be attributed to him. In this moral order every rational being has a determined place and his fate is a result of the general world order. These statements caused the charge of atheism to be brought against Fichte, which he indignantly denied. He later modified his expressions, emphasizing a divine "will" as back of the world order, but not attributing personality to it in our sense.

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[27] See Bernard's translation §§ 83–86.

[1] See Chap. XX.

NOTE Q

THE PANTHEISTIC DENIAL OF PERSONAL IMMORTALITY

The following illustrations will make clear how pantheism denies personal immortality:

A Brahman philosopher, Yainavalkya, being about to withdraw into the forest to meditate and attain immortality, takes farewell of his wife, who asks him to tell her what he knows of immortality. He replies: "Thou art truly dear to me and I will answer thee. It is with us, when we enter into the Divine Spirit, as if a lump of salt was thrown into the Sea. It becomes dissolved into the water from which it was produced and cannot be taken out again. But wherever you take the water and taste it, it is salt. As the water becomes salt and the salt becomes water again, thus has the Divine Spirit appeared from the elements and disappeared again in them. When we pass away, my wife, there is no longer any name." She replies, "My lord, here thou hast bewildered me, saying that at death, there is no longer any name (any distinction of individual being)." Her husband answered: "My wife, what I say is not bewildering but the highest knowledge. For if there are two beings, then the one sees and knows the other. But if the one Divine self be the Whole of all things, whom can he perceive or see or know as distinct from himself? How should he know himself as distinct from himself? Thus, thou hast been taught, this is immortality."

Jalálu'd-Din Rúmi, the Persian, in his great work, *The Masnavi*, represents the human soul as seeking admission into the sanctuary of Divinity, thus: "One knocked at the door of Divinity, and a voice from within inquired, 'Who is there?' Then he answered, 'It is I.' And the voice from within replied, 'This house will not hold thee and me.' So the door remained shut. Then he sped away into the wilderness, and fasted and prayed in solitude. Then, after a year, he returned and knocked at the door of Divinity, and the voice again demanded, 'Who is there?' and the traveler replied, 'It is thou.' Then the door of Divinity opened wide and the traveler entered in."

In the first decade of the last century the same ideas found pathetic expression in the correspondence between Schleiermacher and his friend Frau von Willich, who had just lost her husband, Ehrenfried, a young divine to whom Schleiermacher was much attached. Frau von Willich writes: "I implore you, by all that is dear and sacred to you, give me, if you can, the certain assurance of finding and knowing him again. Tell me your inmost faith in this, dear Schleier. Oh! if it fails me, I am undone. . . . Speak to my poor heart. . . . If I think that

his soul is resolved back, quite melted away in the great All — that the old will never come to recognition again — that it is quite gone by — Oh! this, I can not bear." He replies: "How can I dissipate your doubt, dear Jette? It is only the images of fancy in the hour of travail that you want me to confirm. Dear Jette, what can I say to you? . . . If he is now living in God, and you love him eternally in God, as you knew and loved God in him, can you think of anything more glorious and beautiful?" "Ah! then," she cries, "the apparition has vanished forever, that dear personal life which is all that I knew — he is Ehrenfried no longer. He is gone to God, not to be kept safe, but to be eternally lost in Him." Schleiermacher expostulates with her for such a complaint: "Nothing is more glorious than to live in God and be loved in Him. In comparison with this everything that belongs only to the personal life and arises thence is nothing." She still argued: "When I loved God and my Ehrenfried, there were two objects of my love. Now when he is gone, and is living eternally in God, are there still two objects of my love or only one? If I am to have but one object of affection now, my husband being merged in the Divine, how is it that I shall not vanish too, but still remain?"[1]

NOTE R

CHRISTIAN SCIENCE

The new but wide-spread cult of Christian Science, is a conspicuous example of ignorant and unbalanced faith in the Divine Immanence. As set forth in Mrs. Eddy's *Science and Health, with Key to the Scriptures,* it is a crude, unintelligent form of idealistic pantheism. God is the one existence. Matter has no reality: man is the finite form of the Infinite, not really distinct from it, for "there can be but one soul." The physical world is not the expression of divine ideas (as in all sane forms of idealism), but somehow evil in itself, "perpetual misrule under the form of natural law." The system — if it deserves such a name — is, therefore, a mongrel form of Manichæan Gnosticism, "mortal mind" playing the part of the Demiurge. True mind is the transcendent principle of all good — God Himself; mortal mind is a hostile power, the source of all evil and misery, beginning with the harmful lie, universally believed, of the reality of matter. No explanation is offered of the nature of mortal mind itself. It cannot be the product of an "evil spirit," for there are no spirits save God's; it cannot be the creation of the human mind, for that is a part of the Divine Mind. The system is also gnostic in making salvation depend on knowledge — deliverance from our false belief in matter and pain

[1] *Aus Schleiermacher's Leben. In Briefen,* Vol. II, pp. 82 ff.

and disease. Sin is ignorance, a form of insanity, not the expression of a will alienated from righteousness, for there is no real freedom in the finite creature. More stress is laid on physical than on moral good, and the latter is treated not as an end but as a means to the avoidance of pain and death, as in the similar crazes of mind and faith curing. The emphasis on bodily health appears in the three elements of the system: (1) The restoration of Christian healings; (2) The establishment of Christianity on a scientific and demonstrable basis (*i.e.*, by means of miracles of healing the body); and (3) The metaphysical interpretation of Christ's teaching.

The very remarkable motto of the book suggests an extreme subjective idealism (*solus ipse ego*). But the author shows no acquaintance with the metaphysical terms she uses:

> "I, I, I, I itself, I,
> The inside and the outside, the what and the why,
> The when and the where, the low and the high,
> All I, I, I, I itself, I."

Mrs. Eddy takes the words seriously, but they are really part of a burlesque of Fichte's Idealism which may be found in Coleridge's *Biographia Literaria.*[1] She appeals to Bishop Berkeley to support her denial of matter, but he considers the world the expression of divine ideas, beautiful and good, whereas she thinks that "to regard God as the creator of matter is not only to make him responsible for all disasters physical and moral, but also to make him guilty of maintaining perpetual misrule in the name and under the form of natural law." The attempt to carry out this crude idealism lands her in absurdities and contradictions.

Eddyism differs from the simple faith or mind cures in having been thoroughly organized under a leader with absolute power, and being based on a book of metaphysics which is placed on a plane with the Bible. Indeed according to George Tompkins, C.S., one of the authorized Scientist lecturers, the New Testament foretold its later rival. "We consciously declare that *Science and Health, with Key to the Scriptures,* was foretold, *as well as its author,* Mary Baker Eddy, in Revelation X. She is the 'mighty angel,' or God's highest thought to this age (verse 1), giving us the spiritual interpretation of the Bible in the 'little book *open*' (verse 2). Thus we prove that Christian Science is the second coming of Christ — Truth — Spirit." The book is supposed to be directly inspired. In January, 1901, Mrs. Eddy said, "I should blush to write of *Science and Health, with Key to the Scriptures,* as I have, were it of human origin, and I, apart from God, its author; but as I was only a scribe echoing the harmonies of Heaven

[1] *Harper's Edition,* p. 260, note.

in divine metaphysics, I cannot be supermodest of the Christian Science text-book." The best answer to her claim of inspiration — apart from the absurdity of the book itself — is her selling at an exorbitant price what she says are not her words but God's, revealed for the healing of the nations.

Into the question of whether Mrs. Eddy really discovered Christian Science or appropriated it from the notes of Phineas Quimby, a faith healer who had himself cured her, we have not space to enter.

We should recognize the good elements in Eddyism, its reaction against materialism, its affirmation of the nearness of God to the spirit of man, its emphasis on love and purity (which is its only point of contact with Christianity). But we must expose its many utterly anti-Christian elements and show that its cures, in many cases real, have nothing to do with its muddled metaphysics. We should not deny that many recoveries from sickness and chronic troubles have occurred under this as under other forms of "faith curing" or mental suggestion through all history, especially when a number of believers act upon each other, but we should show the absence of any proof whatever that such cures are connected in any way with Mrs. Eddy's metaphysics. There is no intelligible basis for the incoherent utterances of the "new scriptures" and the craze itself will die out, but in the meanwhile it has such wide influence that the Christian thinker must study it.

NOTE S

THE *A PRIORI* ARGUMENT FOR MIRACLES

The reason why the discussion of miracles is reserved for a note rather than given in the text, is because miracles rightly understood are a part of the historic revelation of God to man, and hence belong more to works on Christian apologetics than to those on philosophic theism. They are God's immediate action on the world, revealing His love to men, and declaring His power in control of the world. However, an argument for the possibility of miracles can be made from the *a priori* standpoint, which will enable us to judge adequately concerning the miracles recorded in the Bible.

First let us notice that there are three elements indicated by the New Testament words for miracle. (1) "Wonder," Latin *miraculum*, a portent, a prodigy, expressing the amazement the miracle arouses in the beholder. (2) "Powers" (always plural), which carries the thought a step further back to the agencies, exceeding Nature's forces, which alone could work the miracle. But these powers need not be divine, for no moral element is implied by the use of this word. (3) "Sign," or symbol, of some spiritual truth or reality. This is St.

John's word, and by it he connects the miracle at once with God and His revelation. Hence we pass beyond "wonders" and "powers" to the idea of moral purpose. It rules out all unworthy miracles, such as the ecclesiastical, and warns us that there must be a correspondence between the sign and God's revelation. The miracle must have an adequate aim as well as adequate power.

Miracles, as "signs," are rational and credible to all who have faith in a personal God, but the popular idea that they prove *per se* a revelation from God is contrary to the Bible teaching. The Mosaic law bade the people not to follow false prophets, even if they did work "miracles,"[1] and Isaiah warned, "And when they shall say unto you, Seek unto them that have familiar spirits . . . if they speak not according to the law and to the testimony, it is because there is no light in them."[2] Christ Himself rebuked the Jews' demand for signs and wonders in order to force faith, for such prodigies would have no value for the soul. He represents Dives in the parable pleading for his brothers, "I pray thee, therefore, that thou wouldst send Lazarus to my father's house; for I have five brethren; that he may testify unto them, lest they also come into this place of torment." And Abraham replies, "They have Moses and the prophets; let them hear them." Dives pleads again, "Nay, Father Abraham, but if one go to them from the dead, they will repent." To which is given the final reply, "If they hear not Moses and the prophets, neither will they be persuaded if one rose from the dead."

The "signs" are not so much proofs as parts of the Revelation itself, setting forth some spiritual truth, some aspect of the divine glory. A miracle alone can never create faith in God, for its proper definition affirms previous faith in God's existence and power. Miracles confirm faith. Our attitude toward the revelation of God in Christ determines the possibility of our belief in them. Christ worked no miracles, where there was no sympathy with His message or Himself.[3] All discussion is futile apart from the central miracle of history, the Resurrection of Jesus declaring Him to be "the Son of God with power," in which all other miracles find their justification as part of the historical revelation of God, which culminated in the Incarnation.

Hence, a miracle is a phenomenon, unexampled in the course of nature and beyond the operation of its forces, which attests its divine source by the character and aim of its worker, and by his teaching which our spirits recognize as divine. Miracles are credible only on the presupposition of a personal God, free to act in the world, and are

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[1] Deut. 13.
[2] Isa. 8:19, 20.
[3] Matt. 13:58; Cf. 12:39.

probable only to those who believe also in His love as ready to respond to the human need of a revelation.

The Scientific Denial of Miracles

Hume's argument against the possibility of miracles is that a miracle is a violation of the laws of nature because contrary to our uniform experience. No testimony can establish it, because human testimony is fallible and nature's order is not. His definition, "A miracle may be accurately described as a transgression of a law of nature by a particular volition of the deity or by the interposition of some higher agency," emphasizes solely the marvel element. Ignoring his own earlier philosophy of a haphazard world without any definite law of cause and effect, Hume now assumes a universe so rigid in its order that any variation is incredible in itself. No human testimony avails to prove a miracle against the "unalterable experience of the race," for men may lie and deceive or be deceived, but nature's order never varies.

Mill and Huxley deny Hume's premises of the definite and unalterable order of Nature's phenomena, the idea that what has been, will be, and there is no new thing under the sun. In these days, we are all aware that entirely new and strange phenomena do appear in our laboratories. "Nature" is only an expression for the sum total of known phenomena. Its known laws, however uniform, cannot exhaust its possibilities. If a miracle really happens, it takes its place, as a marvel, among the phenomena which await scientific explanation. Huxley declares: "I am unaware of any impossibility except a contradiction in terms, a round square, a present past. If a dead man should come to life, it would not prove that Nature had been violated, but only that those laws, even when built on universal experience, represent only incomplete knowledge of Nature's mystery." But any amount of evidence could only prove that the strange event actually occurred, not that it was an act of God, for no phenomenon can reveal a power not itself phenomenal.

Huxley really agrees with Hume, and his concessions have been overestimated, even by capable scholars. His position appears in his analogy between the Virgin Birth of Christ and the parthenogenesis in certain forms of life, which some thoughtless Christian thinkers also hold. But parthenogenesis occurs constantly in Nature — a miracle must be unique. If the physical order be the all, then indeed there can be no violation or modifying of that order, for there would be no real and free causation in the universe, either in God or man.

The scientific denial of miracles contends that a miracle is either a delusion of the mind or illusion of the senses, for if it is a phenomenon in Nature, it is due to natural causes which as yet our science cannot

define. Mill, however, admits that the action of God in a miracle would not be a violation of the uniformity of nature, for His will would be a new cause or "condition," though this is contrary to his own philosophy which denies any causative power to will. Hence his ultimate conclusion is the same as Hume's.

This theory ignores the personal human factors, and isolates the miracle from its own environment, the progressive historical revelation of God, and the spiritual and ethical truths which it confirms and which alone make it credible to us as worthy of divine agency. There is not the slightest attempt on the part of the critics of this school even to consider the Christian point of view. The miracles of the Lord, profound and credible in their historical setting, are classed with the crudest prodigies of the heathen world. Hume argues that if we accept Christ's miracles, we must also accept Mahomet's miracles and the Chinese marvels! Matthew Arnold thinks that a good specimen of a real miracle would be to turn a pen into a penwiper. Huxley thinks that we have no right to believe the New Testament miracles and reject the so-called ecclesiastical miracles. J. H. Newman did grievous harm to the cause of reasonable faith by his wholesale acceptance and defense of the numberless marvels of the early and mediæval church, however trivial and grotesque.

Theories of Miracles Which Admit of Their Reality

These theories are all consistent with faith, but not equally biblical or philosophic.

I. The Deistic View. The Deistic conception, as we have seen, starts from the supposition of God as apart from the world. God created the world and set its forces in operation according to certain laws and then withdrew, leaving the world to go on working by itself. There are two variations of this view: (1) Nature is a vast world machine working under its own laws, with occasional interference from without. This was the one definition of miracles in the Deistic period. This crude idea of a miracle as a violation of the laws of Nature by its Maker, now held by few Christian thinkers, underlies Hume's argument and the scientific denial. It corresponds to the Cartesian theory of God and the world as distinct and apart, but the Creator intervenes on due occasions to harmonize the divine order and the world process, or our thought life and bodily action. Some popular preachers still expound this view. (2) A later view, on the lines of the pre-established harmony between mind and body advocated by Leibnitz, explains miracles as sudden changes in the order of nature, prearranged to happen in coincidence with great crises in the moral history of humanity, or new methods of working appear at certain prearranged times. The best illustration is Babbage's proposed mathematical ma-

chine, intended to show how strange combinations of numbers would appear of themselves at certain times. But the mere occurrence of a wonder is not sufficient for a true miracle. There must be a correspondence between the wonder and the spiritual truth it is intended to emphasize. Hence the world's great clock is arranged to strike at the hour of destiny in historical crises.

Both these views deny the ever-present and immediate action of Deity.

II. The Ideal Human View. This theory attracts by its simplicity and subtle flattery. Man is meant to be absolute lord of Nature. Even now, he molds it to his will, his power over it growing with his scientific knowledge. Christ wrought miracles as the perfect Son of Man, exercising powers belonging to the ideal humanity. His miracles differ from ours only in degree. Why, then, should the race not go on mastering knowledge until man attains his ideal perfection and reaches the power of Christ? The difference between Christ and man, as to their power over nature, is like that between a man and a child, or between perfect and partial knowledge. Christ was the Ideal Man and His power is that of Ideal Humanity at its highest, exercised as God meant it to be exercised. This was the theory of Schleiermacher, and is used by Ebrard in his theory of the Kenosis.

As stated by its advocates, this view at first sight seems simple and plausible. To Him, the *Perfect* Man, there *is* no such thing as the supernatural. He is simply a perfect man, with perfect human knowledge of the laws of His Father's universe — whether you call it natural or supernatural — and by this knowledge doing things as a matter of course that *imperfect* men cannot do, simply because they have not this perfect human knowledge; just as any civilized man has more control over nature than a savage has, because his knowledge, although the same in kind generically, is widely different in degree.

The premise of this theory is true. Man is meant to be lord over nature, and he does work "miracles" in the sense that he originates new phenomena by his free-will force. But we cannot admit that man can, in his own power, ever work such signs as Christ did, or in the same way.

But the New Testament teaching does not permit this interpretation. Christ in the flesh was like unto us in all things. He did "the works which His Father gave him to do," not by any power inherent in perfect humanity, but solely in and through the Spirit. He said, "If I by the Spirit of God cast out demons, then is the kingdom of God come upon you."[4] St. Peter speaks of Him to the crowd at Pentecost as a "man approved of God unto you by mighty works and wonders and

[4] Matt. 12:28.

signs which God did by Him in the midst of you."[5] The New Testament distinctly represents that Christ did not raise Himself from the dead, but that God raised Him.

The emphasis in the Gospels falls rather on His "weakness" as man than on His "glory" which comes with the Ascension, when He says to His disciples, "All authority hath been given unto Me in heaven and on earth."[6] Only at the Ascension did He as man enter on perfect manhood, "clothed with power" as God intended man to be in final glorified state. It is the Fourth Gospel, which more than the others, emphasizes the divinity of Christ, which yet represents the miracles as "works" done by the Father. "Believest thou not that I am in the Father and the Father in me? the words that I say unto you I speak not from Myself: but the Father abiding in Me doeth His works."[7] Therefore, according to the New Testament His ideal manhood consisted not in perfect knowledge and control of nature, but in His willing obedience to the Holy Spirit and His unbroken communion with His Father. Science is morally indifferent. Given the knowledge, the sinner and atheist can work its marvels as readily as the saint. Clifford, the sceptic, investigates molecular physics as accurately as Clerk Maxwell, the Christian. The scoffing, even the licentious physician, can discover bacteria and the antitoxins as well as devout Pasteur, the theist. It is this moral indifference inherent in all purely intellectual activity, which forbids our classing our works of healing with Christ's, as has been done under the supposed sanction of the text, "Verily, verily, I say unto you, He that believeth on Me, the works that I do shall he do also; and greater works than these shall he do; because I go unto my Father."[8] These "works" are not physical marvels, but miracles in the realm of grace, wrought in faith and love through the power of the Holy Spirit outpoured by the risen Lord on His people — the preaching of the Gospel and the gathering in of thousands into the Christian Church, and the spread of Christianity through the world, forgiving sins and recreating souls. It is our unconscious, materialistic point of view which blinds us to the fact, which great Christian thinkers felt and taught, that the inner miracles are more difficult and wonderful than the outwardly visible. Thomas Aquinas said: "The three great miracles are the creation of the world, and of souls, and the forgiveness of sinners." Hooker expresses his belief that "to convert an unholy man to holiness is as great a miracle as to create a world."

This view quietly ignores the many miracles of Christ which must

[8] John 14:12.
[7] John 14:10, 11.
[6] Matt. 28:18.
[5] Acts 2:22.

surpass the powers of man, even after the Resurrection, such as raising the dead, multiplying the loaves and fishes, etc. The difference is obvious. We rule nature from without by obeying her. All that we can do is to arrange unusual combinations of matter, and her forces then act according to their laws, but God's action is from the center, immanent and creative, and nature obeys His will as our bodies do our wills.

III. The Theistic View. As we have seen in our study of Divine Immanence, nature is the phenomenal manifestation of divine thought. A miracle is not a violation of its order, but a special act of the ever-present and immanent divine Will on which that order depends. Laws of nature are simply the habitual modes of God's action, unvarying because of His own wisdom and, also, because only through a fixed world-order could the mind of man be trained and science be possible.

Christian Theism regards Nature as the embodiment of divine thought and dependent for its being and order on the ever-present and acting will of God. Nature has a God-given law of development. We do not accept the extreme view of Divine Immanence, that God performs every act of nature by a voluntary act. He has imparted energy to nature, which operates according to laws decreed by Him. But both philosophy and faith refuse to permit us to think that this relative independence can be any barrier to God's free action. The uniformity of nature is the uniformity of God. The laws of nature are simply God's common, habitual ways of acting. Miracles, on this view, are credible and most rational. They are simply unusual expressions of divine authority, voluntary departures for good reasons from God's regular method of action in the world. No laws are "broken," for the laws of Nature have no existence apart from God's will and cannot bind the action of His will.

God, if the master, not the creature, of His own world, must be free to change His method of working and cause new things to appear wheresoever He will for sufficient reasons. The heart of man discerns many such reasons. (1) The mighty works of Christ reveal the Father, "Who declares His almighty power chiefly in showing mercy and pity." The common doubt of miracles is due to the entire ignoring of this reason of the heart, which to Christian faith justifies the miracles. The signs and symbols of a spiritual order are isolated from their proper environment, first, the past, the whole long history preparing for the coming of the Lord of History, and second, the present environment, the "psychological climate" of all who feel their need of God for light and help, and who rejoice to believe that the miracles of Christ do reveal the Father. Scientific "miracles" are equally incredible to the ignorant, who know nothing of the presuppositions of science. (2) The reality of a moral order in God and man is another reason for miracles. A world of things ruled by purely physical laws would

and must be absolutely unvarying. But once admit free wills, and departures by men from the normal order become possible. If the wills are bad, they may necessitate unusual action on the part of God Himself to correct disorder, which He did not will. But in these special cases, God does not act one whit more directly than ordinarily, though He acts in one sense more freely, being unconditioned by what we call the ordinary laws of Nature, and merely changing His method of action. The ideal harmony between God and man has been broken and man's normal relation to nature disturbed through sin. Miracles, therefore, are not "a mending of God's own handiwork," but a revelation of the true order of the universe needed by man who has marred the world by sin and separated himself from God. It is not God's work that needs mending, but the world man has made "subject to vanity." Miracles are not interruptions of the ideal order, but revelations of the true law — that which ought to be. (3) In the third place, miracles are sorely needed also to break the tyranny of our senses. The very uniformity which reveals God's presence and power to the eye of faith, hides Him from the natural man who lives solely in the sphere of sense and is ever tempted to forget the invisible Creator in the use and study of the creation. Spiritual blindness, the dulling of the inner eye to the things above and within us, is our besetting sin. We study the wondrous works of nature but see or feel no sign of her Maker. We do not worship the material creation, as men of old did, but we do make a very fetish out of nature's order. Men of science, even more than other men, since God is not so often in their conscious thought, need some "sign" that God is Lord in His own world and Nature herself but His visible garment.

We repeat here the principle that God's freedom and man's stand or fall together. To deny God's power to act on nature is to deny man's power to act at all, and lands us in fatalism. But God's will is the one universal force in the world, the source and origin of all forces. If God is imprisoned in nature, who imprisoned Him? The only barrier to God's action is something incredible to the reason, *e.g.,* a round square, a four-sided triangle. Man as a free agent, acting on the stream of phenomena, always in accordance with its laws, may be said to belong to the "supernatural" order, for the *natura,* the endless process of birth and change and death either includes him in its resistless current or else he stands in his degree above it, by God's own appointment.

There are some Christian believers who think it unnecessary to insist on miracles, but unless we do believe that the divine rule embraces the world of nature as well as of spirit, the scientific *Zeitgeist* will deaden faith. If Christ be the Son of God, and God be really the Maker of the world, we may well ask why did not God give a sign in Christ to connect the visible world with the invisible?

Rothe says: "The man who thinks that a miracle is impossible *a priori* does not really believe in a free personal God." "The miracle is not a breaking through of the laws of nature on the part of God, but an activity on the part of God without the interposition of these laws of nature." [9] Christian faith has a right to expect that God will manifest Himself in deed as well as in word. But it will also feel that miracles need not be many and will be on worthy occasions only, for the divine world-order is necessary to human reason and to our control of nature.

Upon the Resurrection of Christ rests our whole faith in miracles. This is the central moment, when the eternal world touched the temporal, and the ever-acting arm of the Lord was uncovered to human view. The one sign of the Resurrection of the Lord, with all that went before and followed after, is sufficient. Faith asks no further wonders in the world of matter, for it rejoices to see and know His mighty works in the world of spirit. "Blessed are they that have not seen and yet have believed."

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NOTE T

SPENCER ON LIFE

Under the title of "The Dynamic Element in Life," Spencer added a chapter to the 1898 Edition of his *Principles of Biology* in which he speaks as follows: "Evidently, then, the preceding chapters recognize only the *form* of our conception of life and ignore the *body* of it. Partly sufficing as does the definition reached to express the one, it fails entirely to express the other. Life displays itself in ways which conform to the definition; but it also displays itself in many other ways. . . . When it is said that life is 'the definite correspondence of heterogeneous changes, both simultaneous and successive, in correspondence with coexistences and sequences,' there arises the question — Changes of what? Within the body there go on many changes, mechanical, chemical, thermal, no one of which is the kind of change in question; and if we combine in thought so far as we can these kinds of changes, in such wise that each maintains its character as mechanical, chemical, or thermal, we cannot get out of them the idea of Life. Still more

[9] *Still Hours,* p. 324.

clearly do we see this insufficiency when we take the more abstract definition —'the continuous adjustment of internal relations to external relations.' Relation between what things? is the question then to be asked. A relation of which the terms are unspecified does not connote a thought but merely the blank form of a thought. Its value is comparable to that of a check on which no amount is written. . . . Thus a critical testing of the definition brings us to the conclusion that that which gives the substance to our idea of Life is a certain unspecified principle of activity. The dynamic element in life is its essential element. Under what form are we to conceive this dynamic element? Is this principle of activity inherent in organic matter, or is it something superadded?" His answer to this question determines nothing. He holds the required principle of activity can be represented neither as an independent vital principle imported into the unit of protoplasm from without, nor as a principle inherent in living matter, emerging from the cooperation of the components. His conclusions are wholly agnostic. "Our explanations finally bring us face to face with the inexplicable. The Ultimate Reality behind this manifestation . . . transcends conception." "Life as a principle of activity is unknown and unknowable." Despite his perplexity his retraction of the older view brings him into relation with the Neo-Vitalists. (Sec. 36, b, c, e, f.)

NOTE U
KINDS OF IDENTITY

There are three kinds of identity.

1. Inorganic, material sameness. Two ideas are included in this kind of identity, (a) the permanence of the *matter* composing a given object, and (b) the permanence of the *idea* embodied in a certain thing, apart from any distinct thought of the matter composing it; *e.g.*, a river whose water changes.

2. Vital or organic sameness, in plant or animal. This identity or individuality consists in derivation from a single *ovum*, and in the permanence of the life-force, independent of its matter which is constantly changing. It is not in the substance that the identity is manifested, but in the "form." The elements change incessantly in their particles which circulate in and pass out of the body. Only the form or formative ψυχή is persistent, and alone maintains the living plant or animal. The word "form" is used in Elizabethan English for that which the thing really is, *e.g.*, "Reason is the form of man, and he that lacks this may well be like a man, but no man is." (Woodhouse, 1605.)

3. Personal identity, the consciousness of the self as personal being, distinct from all its experiences, inner and outer, and the same in the present as in the past.

NOTE V

EMPIRICAL VIEWS OF THE SELF

The Self was denied from the beginning by the Empirical school. Locke's suggestive questioning as to what forms personal identity was logically developed by Hume.[1] All we know or can know are the continuous states of consciousness which pass through the mind, over which we have no control and whose origin is hidden from us, since we know only "ideas." He pictures the mind as a kind of theater, but for whom is the show? What we call mind is nothing but a bundle of different perceptions united together in certain relations and supposed falsely to be endowed with a certain simplicity and identity. This ignores half of the affirmation of consciousness at each moment. We may not be able to know the self by itself, but it is given with absolute certainty in even the briefest state of consciousness as the subject which is conscious of the thought or the feeling. Feelings, sensations, thoughts, are utterly empty concepts, unless I can call them mine. In the midst of all those "passing and re-passing and gliding perceptions," I, the unit being, recollect, judge, and decide. Nay, my very consciousness of the passing, and the successive character of these perceptions is due, I cannot help thinking, to the existence of my own permanent self.

Spencer considers the self impossible because unthinkable. Belief in the reality of self is, indeed, a belief which no hypothesis enables us to escape. What shall we say of these successive impressions and ideas which constitute consciousness? Shall we say that they are the affection of something called mind, which as being the subject of them, is the real *ego?* If we say this we manifestly imply that the *ego* is an entity. "Considered as an internal perception, the illusion results from supposing that at each moment the *ego,* present as such in consciousness, . . . is something more than the aggregate of feelings and ideas which then exists. . . . Either the *ego,* which is supposed to determine or will the action, is present in consciousness or it is not. If it is not present in consciousness, it is something of which we are unconscious,—something, therefore, of whose existence we neither have nor can have any evidence. If it is present in consciousness, then, as it is ever present, it can be at each moment nothing else than the total consciousness, simple and compound, passing at that moment."[2] He considers the self solely as dependent on the environment, a continuous adjustment of a set of inner relations to a set of external relations. He

[1] Locke, *Human Understanding,* Bk. II, Ch. 27. Hume, *Human Nature,* Bk. I, Pt. 4, § 6.

[2] *Principles of Psychology,* § 219.

thinks that free will, did it exist, would be entirely at variance with that beneficent necessity displayed in the progressive evolution of the correspondence between the organism and its environment. Hence we shall cease to think, and have the blessedness of automatic machines, adjusting themselves by instinct to their environment! But if nature left to herself does her work so well without the help of useless mind, whence came the strange delusion, which we all have, that we are free agents and can form our lives and modify even nature's order?

NOTE W

J. S. MILL ON THE MEMORY

"This succession of feelings, which I call my memory of the past, is that by which I distinguish my Self. Myself is the person who had that series of feelings, and I know nothing of myself, by direct knowledge, except that I had them. But there is a bond of some sort among all parts of the series, which makes me say that they were feelings of a person who was the same person throughout . . . and a different person from those who had any of the parallel successions of feelings; and this bond, to me, constitutes my Ego." And at a later time: "The fact of recognizing a sensation, . . . remembering that it has been felt before, is the simplest and most elementary fact of memory: and the *inexplicable tie* . . . which connects the present consciousness with the past one of which it reminds me, is as near as I think we can get to a positive conception of Self. That there is something real in this tie, real as the sensations themselves, and not a mere product of the laws of thought without any fact corresponding to it, I hold to be indubitable. . . . This original element, . . . to which we cannot give any name but its own peculiar one, without implying some false or ungrounded theory, is the Ego, or Self. As such I ascribe a reality to the Ego — to my own mind — different from that real existence as a Permanent Possibility, which is the only reality I acknowledge in Matter. . . . We are forced to apprehend every part of the series as linked with the other parts by *something in common* which is not the feelings themselves." (Quoted by James, *Principles of Psychology,* Vol. I, pp. 356–7.)

NOTE X

RELATION OF SCIENTIFIC THEORIES TO HUMAN PERSONALITY

Science, being the study of phenomena or sense-perceptions alone, can neither prove nor disprove spiritual Being, but its evidence of the unreliability of mere appearances and recognition of force as the ultimate reality make against naturalism.

Many men of science are simple agnostics. The whole trend of their studies turns their thoughts, as we have seen, from the inner life and its experiences and convictions. But few great men are open deniers of the faiths of the heart as utter impossibilities. True scientists make their appeal direct to the reason, not to the mere appearance of things, and each advance is an achievement of the mind, and becomes such by the ability to see beneath the visible phenomenon and utterly reverse its appearances to the eye.

There is much reverent agnosticism acknowledging the mystery of the universe never felt so truly as today. The dynamic theory of matter makes for faith, and the great laws of the conservation of energy and transformation of forces suggest that the peculiar force we call will-power or simply spirit, the only force we really know, may survive the death of the body, its own creation, in some other form.

Some theists, in order to illustrate the evolution of man, make use of the theory of Trichotomy, that man consists of body, soul, and spirit. (I Thess. 5:23.) The life-force, which is not a transformation of physical force but proceeds from the Giver of Life, moves upward through organized but non-sensitive plant life to soul, the organizing sensitive and semi-conscious life of animals, rising in some higher forms to the lower self-seeking and contriving faculties of the understanding. In man, by inspiration of the Spirit of God, spirit appears, the self-conscious, rational, and ethical personality, knowing God and duty, which survives death. Aristotle made the same distinction between the vegetative and purely sensitive ψυχή of plants and animals and the νοῦς (later called the πνεῦμά), which is inbreathed by God and makes man more than an animal.

The distinction between the soul and the spirit as revealed in the psychical or sensuous man, and the true man, conscious of duty and capable of high and holy faiths, is brought out clearly in Hawthorne's *Marble Faun.* Common speech, though using mostly "soul and body," recognizes the distinction. We say, "I am a spirit" and "I have a soul," never *vice versa.* "A whole-souled" man never means a spiritual or religious man. Give the body of a man to the soul of an ape, and he would drag it down and degrade it to brutish passions. Give

the body of an ape to the spirit of a true man, and he would develop and make it like a human body. Robert Browning states the trichotometric theory as follows:

> "Three divers persons witness in each man,
> Three souls which make up one soul: first, to wit,
> A soul of each and all the bodily parts,
> Seated therein, which works, and is what Does,
> And has the use of earth, and ends the man
> Downward: but, tending upward for advice,
> Grows into, and again is grown into
> By the next soul, which, seated in the brain,
> Useth the first with its collected use,
> And feeleth, thinketh, willeth — is what Knows:
> Which, duly tending upward in its turn,
> Grows into, and again is grown into
> By the last soul, that uses both the first,
> Subsisting whether they assist or no,
> And, constituting man's self, is what Is —
> And leans upon the former, makes it play,
> As that played off the first: and, tending up,
> Holds, is upheld by, God, and ends the man
> Upward in that dread point of intercourse,
> Nor needs a place, for it returns to Him.
> What Does, what Knows, what Is; three souls, one man."[1]

While St. Paul cannot be said to have a technical psychology for man, yet he speaks of three classes of men: (a) *sarkikos,* sensual, ruled by the flesh; (b) *psychikos,* the "natural" man, who lives in the realm of the senses and emotions, highly intellectual and artistic at times, but without perception of spiritual things; (c) *pneumatikos,* the spiritual man consciously following the spirit. The pneuma exists in all the classes, but is dominated by the flesh or the senses in the first two. "Reason" has two sides: the higher side which knows duty, self, and God; the lower side, which observes phenomena and reasons about them. This is called the understanding or logical faculty. The merely sensuous man, although he stands on a higher mental plane than the animal, still acts mostly within that plane. He is capable of more action than the animal because he is a spirit and has a conscious mind. Thus his motives and actions differ in degree, not in kind. The higher animals have simple reasoning powers and look out for themselves, as men do.

The most obvious distinction between man and animal is the power of rational speech as distinguished from the utterance of cries expressive of emotion and from mere sign language. No animal speaks, and no race of man without speech has ever been found. J. S. Mill makes speech the distinctive mark of a man, expressing rationality. Max Müller says: "No reason is possible without language and no

[1] *A Death in the Desert.*

language without reason." This distinction is as old as Aristotle and the New Testament. "Logos" means both the reason, or inner thought, and the word which expresses the thought. The beginning of rational speech is still the problem of thought, as insoluble as of old.

Reason could not develop without words, but how could words first arise for reason to use, and how could the whole society agree as to the conceptual meaning of the first words? Animals have the same perceptions of form and color we have, but they do not arouse the same ideas. They have percepts but not concepts. They think purely in terms of sensation, in picture language, and not in abstractions. Stout and Baldwin define conception as the "cognition of a universal as distinguished from the particulars which it unifies. The universal apprehended in this way is called a concept."

Another vital difference is the moral nature. The animal has no thoughts which correspond to conscience, duty, and faith in the proper sense. Many psychologists ignore this vital element entirely, but it cannot be omitted, if man is to be studied in his whole nature. Darwin admits the great difference on the ethical side. Attempts are made to show that animals do have ethical feelings, because they seem to act morally. But it is probable that in such cases we put a human construction on their actions and go beyond their limited experiences.

Whether we accept Trichotomy or not, it is helpful in distinguishing man from the animal on the side of mind. This view denies the theory of an unbroken and purely mechanical development from matter to man. It affirms the immediate action of the great Evolver and Ordainer of nature at certain transition points. Many evolutionists admit such *new departures* in development, which the mechanical theory cannot explain. Du Bois-Reymond names seven such "breaks" in the process.[2] A. R. Wallace mentions three: the appearance of the first cell, the beginning of sensation, and the self-consciousness and conceptual thought of man.

Lloyd Morgan thinks there are certain departures in mental development. "The introduction of the process of analysis appears to me to constitute a new departure in psychological evolution; (and) the process differs generically from the process of perceptual construction on which it is grafted. . . . I see no grounds for believing that the conduct of animals, wonderfully intelligent as it is, is, in any instances known to me, rational."[3]

God is ever acting back of the whole process of evolution, but He is not compelled to act along a certain line, and at times He initiates a new departure or mode of action. If an observer from another world should visit our earth at long intervals and watch the life of its in-

[2] See pp. 211–12.
[3] *Animal Life and Intelligence*, p. 373.

habitants, he would notice in the last century an incredible revolution in mechanical work through the use of steam and electricity. If he admitted mind to be at work at all, he would not say that it acted at these points only and that all preceding stages were automatic, but that here it worked on entirely new lines and used higher forces not known before. In the same way, we hold that God is ever present and acting but, at certain points, he acts by new methods or introduces new powers or agencies, lifting the whole divinely guided process to higher levels, till it culminates in man, its goal and head. Wallace argues from physiological traits in man which natural selection cannot explain, that a superior intellect is guiding the development of man for a specific purpose, just as the intelligence of man guides the development of certain varieties of plant and animal life. The mechanical laws of nature alone are not sufficient to produce man.

The Scripture doctrine of the unity of the human race (Acts 17:26) receives unexpected confirmation in the scientific theory of monogeny, that each species proceeds from one primitive stock. Dr. Brinton, a pure evolutionist, accepts discontinuous evolution and thinks that the first human pair were gifted with human traits and capabilities which lifted them above the animal plane.

John Fiske holds that while the theory of natural selection will go far toward explaining animals and plants, it remains powerless to account for the existence of man. "The difference between man and the ape transcends the difference between the ape and a blade of grass. . . . for psychological man you must erect a distinct kingdom; nay, you even dichotomize the universe, putting Man on one side and all things else on the other." [4]

Professor Otto of Göttingen suggests that that theory is reasonable and in accord with scientific facts which holds that the final leap from animalism to man was so great and sudden as to cause a rich development of the psychical nature, surpassing all that had gone before. This would coincide with the appearance of the personal spirit.[5] The best treatment of the progressive development of life to man, guided by the spirit of God is found in Le Conte's *Evolution and Its Relation to Religious Thought.*

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[4] *Through Nature to God,* p. 82.
[5] *Naturalism and Religion,* pp. 330–6.

NOTE Y

BRAIN AND PERSONALITY

A flood of light has been thrown by medicine and surgery on the question of the relation between the brain and the mind. The discovery by physicians of certain material seats of purely mental functions enables us, without invoking the aid of metaphysics, to argue that personality controls the brain as truly as a musician controls his instrument. Dr. W. Hanna Thomson [1] of New York wrote in 1906 a book entitled *Brain and Personality.* What follows is a statement of the conclusions of Dr. Thomson. Unfortunately space cannot be given to the wealth of data by which he establishes his findings. All quotations are from this book.

Without entering into an elaborate description of the structure of the brain, it may be stated that the gray matter of the brain surface "is specially arranged to subserve certain specific psychical functions only in certain localities in its substance. It is not the whole brain which sees and hears, but only particular limited areas to which the consciousness of sight and hearing are confined." [2] Likewise, it seems probable that "every special psychical function is subserved by its own special seat in the material organ of the mind." [3] If the integrity of a brain area is destroyed the mental function which had its seat there is interfered with, even though the sense organ concerned is still intact and working perfectly. Thus if the visual area of the brain is pressed upon by a clot of blood, sight may be utterly lost, even though the eye itself in all its parts with the nervous tract leading therefrom to the brain be wholly intact. That mental capacity depends on the organization of the gray matter of the brain, rather than on the amount of it, is shown, among other reasons, by the fact that we have two hemispheres in our brain, only one of which is used in thinking. No addition of mental power, nor of mental endowment is secured by our having two brains, any more than the faculty of sight is increased in us by our having two eyes. The advantage of pair organs is that either one of the pair can do the whole business of both if necessary. The pair organs of eyes and ears are merely instruments, and not the sources, of sight and hearing. That our two perfectly symmetrical brains are likewise not the sources,

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[2] p. 38.

[3] p. 39

but rather the instruments, of thought is most convincingly established by anatomical evidence.

"There is a division of labor between the two hemispheres in respect of the control of those muscular movements which are of a voluntary character, the centers of those governing the right half of the body occupying a tract in the gray cortex of the left brain, while those of the left half of the body are correspondingly located in the right hemisphere. The most probable explanation of this arrangement is that it ensures a more perfect balance between the two sides of the body in its muscular movements." [4] Yet that one hemisphere is perfectly able to do all the thinking when the other is destroyed by disease has been repeatedly shown by persons who have lived many years after the complete paralysis of one side of the body, and yet have thought and acted and transacted business as efficiently as before. This shows "that we, as persons, do not depend for our personality upon the number of ounces of gray matter which our cranial cavity contains, but rather on whether the gray matter of one of our hemispheres is in good condition or not. If it is, then the gray matter of the other hemisphere is not needed by us for the purpose of thinking. . . . These undoubted facts, therefore, lead to just as undoubted a conclusion, namely, that everything involved in our conscious personality, while related to gray matter, is only related to, but not originated by, gray matter; for if it were originated by gray matter, then both hemispheres would be equally necessary to our complete personality." [5]

There is nothing in the frame of man, or in his organs, or even in the structure of his brain to separate him clearly from other animals. "But there is one physiological standard by which man can be truly measured, which applies to him alone, and which rounds his whole marvelous being — his faculty of speech. The immeasurable distance between man and every other animal on earth is fully accounted for by the existence, the nature and significance of man's *words*. By the sayings of Francis Bacon we find ourselves in the presence of an intellect which grasps the principles of all knowledge. In the words of Shakespeare well-nigh every experience of human life is vividly embodied. We are awed by the sublimity and the solemnity of the thoughts of him who expressed himself in the words of the Ninetieth Psalm. So, the more we ponder it, the more impassable grows the gulf between the minds of those who could speak thus and the minds of dumb animals. They cannot be the same beings in kind, however similar their bodily relationships be, because the more we recognize what the presence of the Logos in man implies, the plainer becomes the reason why he stands alone in this world. . . . Regarded as a physiological study the faculty

[4] pp. 61, 2.
[5] pp. 68, 9.

of speech consists not in uttering words, but in the power of word making. The primary truth about a word is that it comes only from mind. Apart from mind it has no existence. Every word was originally made by a personality which first designed and invented it. If there be no personality there can be no making of a word. Hence no word ever came, or can come, into existence spontaneously. No human being was ever born with a word. A word, therefore, is an artificial human product, the outgrowth of a need, just as a knife was first made by some one who wanted to cut." [6]

No speechless race has ever been found, and all languages have the same mental elements and grammatical structure. "The necessary conclusion, therefore, which the philologist must come to, is that the source of all words is the conscious mind or human personality itself. It is not, as some reasoners loosely state, that language makes man, but it is man who makes language. The mind comes first and is altogether the beginning and cause of the word." [7] Words are the instruments which the thinker invents or makes for himself for the purpose of defining his thought, and they are as necessary to thinking as they are to speech or writing. Feelings, however, do not need words in order to be experienced and understood, so that when the brain word-apparatus is damaged manifestations of feeling may remain, though all recognizable signs of thought are gone.

"Having considered the relations of words to thoughts, we now come to a crucial point in all our discussion, namely, the relations of words to the brain. We can scarcely overstate the importance of certain modern discoveries on this subject, because they reveal the first recognizable link between the immaterial and the material, between mind and matter, yet demonstrated in science. That link would never have been guessed by metaphysicians, for it was only physicians who could have discovered such facts by their noting the effects of small and strictly localized brain injuries." [8] Such injuries have left people wholly bereft of the power to read words, though they can see them, or to understand words though they hear them. A third kind of injury results in persons being unable to speak or write words though they can both hear and read them. By such facts we learn that speech is of two kinds. (1) The first kind consists of words that come *to* us. If they arrive through the ear they are registered in a particular locality in the cortical area of hearing, which is known as the temporal convolution; if they arrive through the eye by reading they are stored away in an entirely different spot in the cortical visual area, which is called the angular gyrus. (2) The other kind of speech consists of words which

[6] pp. 78–81.
[7] p. 85.
[8] pp. 87, 88.

go *from* us, and as these involve muscular movements, they proceed from yet another place in the brain cortex, in a region in which muscular movements are initiated. Here in a small part of a convolution called Broca's convolution is stored every word that can be spoken. "Now, as we have remarked before, the gray matter of no one of these three seats of words originates or makes any words. They are simply registered there for use, as they would be on a printed page, or on a wax leaf of the phonograph, and how that is done we will learn further on." [9]

We might liken these speech areas to shelves of a library, with the words arranged thereon like so many volumes. When a man learns a new language he adds, as it were, a new shelf. Thus through injury to the brain men have lost the use of one language but not of another, or if they were masters of several languages, they have lost the use of one completely, of another less completely, and of the others proportionately less, as if their registrations in brain matter lay side by side like shelves in a book case. Not only so, but in the recovery of the use of words a patient gets his verbs first and his nouns last, as if the words were registered in series like books in a properly classified library. Some injuries partially damage the brain area and seem to jostle words out of their place, so that the person gets the wrong word when he speaks. There are also shelves in the cerebral libraries for other impressions than those of words.

In seeking to understand these strange facts about the human faculty of speech it should be noted that no one was ever born with this power, and that the development of the speech areas is an acquired change. If the word-faculty were an original endowment of the word areas then both hemispheres would be used for speech, as they are for muscular control. But as we have stated the entire mechanism in all its parts is found only in one of the two hemispheres, while the other remains wordless for life. With right handed persons this hemisphere is the left, and with left handed persons the right. The explanation of this is that "the faculty of speech is located in the hemisphere which governs the hand most used. Hand and speech, therefore, are physiologically connected." [10] In the origin of language, gesture language was evidently the beginning, and more of it than we can realize continues in use. Anatomically this is shown in the brain by the close proximity in which the area governing the use of the hand is to the centers which preside over the movements of the muscles of the face, of the lips, and of the tongue. "We can then see how readily facial expression, lending itself to gesture in attempts at communication, would seek the cooperation of lips and tongue for vocal sounds, soon to become words because

[9] p. 96.
[10] p. 111.

of the human mind back of the sounds. This last element of mind is indispensable, because otherwise the sounds would have remained forever only like those of an anthropoid ape. But as the right hand is the oftenest used for every purpose, so is it of the two hands the oftenest used for gesture, which means of course for language. As soon as other parts were sought for to cooperate with gesture in language, the appeal would necessarily be to the neighboring centers in the left brain, and not by crossing the corpus callosum bridge to the corresponding centers in the other hemisphere. It would not be long, therefore, before the habit became settled to use only parts in the left brain for this specialized work, until finally the habit became fixed for life." [11]

The question of what makes Broca's convolution talk is not so satisfactorily answered by studying the beginnings of speech in children as by studying their learning to read. It will appear as we go on that learning to speak is not done by automatic imitation as many think. "No one can imagine that learning to read can be automatic. It requires instead the most persevering attention and application for many months. Over and over again the pictures of the separate letters have to be identified so as to be distinguished from one another, and then their combination into words successively mastered till the word symbol and its meaning are simultaneously recognized. This process of brain shaping has to be done piece by piece, or layer by layer, so that some persons become word-blind without being letter-blind. But a less spontaneous cerebral act than this can scarcely be conceived. If it is not wholly the doing of what we call *will,* then what *is* it? But the most pregnant fact about this process of learning to read is that by the constant repetition of the will-directed effort to see the letter and word pictures, an actual modification of gray matter results in a limited portion of the visual area, so that it can do what no other gray matter anywhere can do,—see and recognize words. Here, surely, we come upon a most impressive fact, namely, that by constant repetition of a given stimulus, we can effect a permanent anatomical change in our brain stuff, which will add a specific and remarkable cerebral function to that place, which it never had before, and which, therefore, it could not have had either originally or spontaneously. . . . But this material change was not affected easily; rather it came only by laborious and long-continued work spent on that collection of gray matter, and work by something which must be wholly extraneous to the gray matter itself. It is absurd to suppose that any other areas of the cortex which cannot of themselves recognize a letter or word, are the teachers of the cells in the angular gyrus which do the reading. It is the conscious personality alone which does this work, and no better proof of this is

[11] pp. 114, 5.

needed to show that such must be the process than when, in later years, a student learns to read Greek, Latin, and French." [12]

The principle on which all this depends is that a stimulus to nervous matter effects a change in that matter by calling forth a reaction to it, and that repeated stimulation of the same nature, calling as it does for the same reaction, effects a permanent alteration in the nervous matter stimulated. This is the fundamental law of habit. The gray layer of our brains is actually plastic and capable of being fashioned. Therefore, education is not the training of certain innate mental powers, but the slow and laborious physical alteration of the brain itself. This applies not merely to reading but to every form of art and handicraft.

We cannot here follow Dr. Thomson in detail as he proves that all nervous matter is capable of being disciplined and trained by afferent stimuli, from the reactions of the simplest protoplasm up the scale of evolution to the enlarged cerebral hemispheres of the higher mammals and man. All functions, high or low, follow in their genesis the same nervous path in reaction to environment. "Thus even with that unique mental faculty of speech, which we have been considering at length, we are met at the outset with our old familiar terms Afferent and Efferent, as plainly as in any function of the spinal cord. Our speech consists of words which come to us through the afferent channels of the ear and of the eye, and of words which go from us by the efferent Broca convolution. Moreover, in the order of time, the afferent preceded and created the efferent, for the child first heard the words addressed to its ear, and then slowly taught Broca's convolution to respond; slowly, for it evidently understands words some time before it can learn to stammer them on its tongue. But likewise many of the longest and most intricate workings of our minds in acts of thinking, can often be traced to a single afferent excitation which was the origin of the whole process." [13]

It might be inferred, then, that this afferent energy coming from without fashions out of the human brain a pure thinking machine, whose operations, though more complex, yet illustrate the same automatic principles which govern the functions of the spinal cord. "Why is this not enough? It is in no sense enough, simply because the brain of man and the mind of man do not correspond. . . . There is a gap here which no facts of animal evolution even begin to account for. Man's brain in physical and anatomical respects corresponds quite closely to that of a chimpanzee, and hence, according to all precedents, his mind should show but little advance in degree, and *none in kind,* over the mind of this ape. . . . But is it thus? Those stupendous works, the bridge across the Firth of Forth and the Simplon tunnel

[12] pp. 119–121.
[13] pp. 171, 2.

through the Alps, existed down to the smallest detail in their engineers' minds before they existed on earth. Hence, we are in the presence here of a being endowed with the supreme attributes of a Creator, or one who solely by his own designing gives origin to things, which otherwise would not be. Such an endowment makes Man wholly unnatural, because by this time we know Nature well and her limitations in all her works. Where in Nature is there anything so weird as he who *found* the Infinite Ether and straightway made it the invisible bearer of his words across oceans! What else can his mind not do when he orders electricity to change its tones of thunder to the small tickings of a telegraph, or by telephone carry his personal voice hundreds of miles away? Now, our contention is not that such human doings are marvelous, but that they are actually supernatural, because Nature has nothing which even remotely approximates to them. . . . Physically the gap between the brain of man and the brain of an anthropoid ape is too insignificant to count, but their difference as beings corresponds to the distance of the earth from the nearest fixed star. Therefore the brain of man does not account for Man. What does? We are bound by our premises to seek for an answer to this question only by searching the brain itself, to note whether in it there are evidences of the presence of a Something whose agency affords the sole explanation why the human brain differs so in its capacities from any other animal brain. Having started with the brain, with the brain we must continue, let the investigation take us where it may." [14]

Brain matter itself, as we have seen, has none of the properties of mind, becoming related only in an artificial, acquired way to mental processes. A man knows, thinks, and devises not with his whole brain, but only in limited areas of one hemisphere thereof, which he has educated for the purpose. Thus "the speech centers in the brain are as much the creations of the individual himself to store the words in them for clothing his thoughts withal as if he made a wardrobe in which to store garments for clothing his body." [15] But not only have word functions special seats in the brain, but all other mental operations have their particular cortical regions, which have many of them been located through injuries in different individuals. "Therefore while the ability to know is a great attribute of the human mind, yet these facts prove that there are actual physical bases in the brain on whose integrity as such this faculty can alone be exercised. An artist may be lost in admiration while gazing at the Sistine Madonna. An apoplectic clot may make him the next day, though still able to see that great picture, no longer able to distinguish it from a wall paper. A trained musician may be entranced at one time listening to a symphony

[14] pp. 176–179.
[15] p. 180.

of Beethoven, but in a few hours, though still able to hear it, he may be wholly unable to recognize it as music. In both cases a highly developed mental capacity is lost immediately after a local brain injury. How are we to explain this sudden abolition of superior mental endowments by such physical changes? The explanation is as conclusive as it is important, namely, that these knowing areas are found in the same brain hemisphere that contains the speech centers, and in that hemisphere only, so that the inference is certain that they are all created by the same agency. . . . Likewise it has been found that the injuries, technically termed lesions, which produce the various forms of mind-deafness above described, occur only in the left hemispheres of right handed persons, or in the right hemispheres of left handed persons; in other words, they show how these mental functions strictly follow the hand most used in childhood, just as the speech centers do. Hence we learn to know just as we learn to think. We think in words, and for that purpose we register our word memories in their laboriously prepared brain places. So also we register the memories of what we see and of what we hear in their prepared places, the preparation in both instances having originally been begun by the most active hand in response to *personal* intent. . . . According to the physiological laws which we have already mentioned, memories of all kinds are doubtless registered in our brain cells by the original stimulus of each, and when an agency like a conscious purpose systematically repeats the same stimulus to the same cells, they become arranged there in a library of records, as we have shown is the case in the speech centers. . . .[16]

"Human brain matter does not become human in its powers until Something within takes it in hand to fashion it. . . . This Something is not natural, but supernatural, both in its powers and in its creations by means of those powers. . . . This can be no other than that greatest of realities, the Self or the Human Personality. To us this is the most direct certainty which we know of, because all other phenomena are contingent upon and relative to personal consciousness. . . .[17]

"To speak of a personality which thinks, purposes, and wills as automatic, is a self-contradiction in terms. We need not appeal to metaphysics for our argument, because we now meet with another strong line of evidence that the personality can dispense with the most important means of efferent stimuli which Nature furnishes, and yet make good their loss because the personality is independent and self-determining, and hence can triumph over the most serious deprivations possible of its afferent mechanisms for communication with the world in which it lives. This has been shown in some members of our race who have suffered from certain great misfortunes in early life,

[16] pp. 188–192.
[17] pp. 194, 5.

which, however, constitute in a way most instructive physiological experiments. To appreciate the force of these demonstrations we must first take into account how much in each case was lost of life's equipment for mental development. Thus it requires some effort to estimate how much education the human mind receives from the single afferent channel of the eye. To do this at all adequately, we must go back to the first news which the child gets from the outer world by sight. A series of impressions, first of color, then of form, then of distance, and lastly of definite objects, are made upon the brain visual area, until by repetition a vast store of picture memories are there laid up for life, as so many object lessons. How much, therefore, is the mind of a young child deprived of, if it becomes blind before this great afferent teacher could give it a single lesson! . . . We must not forget that to a human ear, however young, words soon have some meaning, more than parents may then suppose, until a few months afterwards they are surprised that their children know so much. If words once begin to reach through the ear, the mind springs forward to its limitless inheritance of thought, and especially of feelings. . . . Close the ear, therefore, of a child, and it remains more a mere animal than when any other avenue with the outer world is closed, because it is dumb.

"If we should liken our apparatus for mind training to a boat which is to take us over the sea of life, the great afferent mechanisms of the eye and of the ear might then be regarded as corresponding to the hull and to the frame respectively. Can the personality, therefore, survive the complete wreck of both, and go on with nothing but the keel to cling to for the rest of the voyage? The answer would certainly be no, if the personality depended, not only for its development, but also for its own origin, upon its afferent mechanisms. If, on the other hand, the Afferent has nothing to do with the personality except to inform it, the loss of the Afferent will have no other effect on the personality than that of leaving it in ignorance. The personality would then be simply like one condemned to solitary confinement. That being so, if only some messages could reach him by any route, however unusual or roundabout, the personality would be found as complete and individual as ever."[18]

The best known and most instructive case demonstrating this conclusively is that of Miss Helen Keller. As the result of sickness she was from the ages of nineteen months to seven years totally blind and deaf, and hence dumb also. The only senses left to her were those of smell, taste and touch. Her teacher, Miss Sullivan, who came to her in her seventh year, succeeded in teaching her in the first month to trace by their letters on the palm of her hand eighteen nouns and three

[18] pp. 199–204.

verbs, without, however, knowing what they meant. "Hardly a month from the beginning of her education, the awakening came. Miss Sullivan had her hold a mug in her hand at a pump, and as the cold water filled the mug and ran on her hand, the teacher traced anew the letters w-a-t-e-r on the palm of her free hand. Miss Sullivan writes: 'She dropped the mug and stood as one transfixed. A new light came into her face. She spelled water several times.' The great step was gained when this blind, deaf and dumb girl suddenly understood that the symbol traced in her palm meant — water. She had got a word! From that moment her personality was set free, like a prisoner allowed to leave a dark dungeon to go wherever he lists, for now for the first time she knew that everything had a *name,* which she could learn on her palm. 'The next morning Helen got up like a radiant fairy. She has flitted from object to object, asking the name of everything,' kissing her teacher for the first time in her gladness. It is touching to read that she tried to teach her dog by tracing the word water on its paws. From this beginning her progress was rapid. In two years and a half she was studying arithmetic, geography, zoology, and botany, and reading general literature."[19] Meantime she was asking every conceivable question, showing that a shut-in mind, so to speak, is concerned with every problem that interests a normal person.

"Three years after she began with her first word, she commenced to take lessons in articulate speech. On account of their complete illustration of physiological fact, we will quote a few passages in which she relates her experience in learning how to make Broca's convolution do this work. 'I shall never forget the surprise and delight I felt when I uttered my first sentence, "It is warm." True, they were broken and stammering syllables, but they were human speech. My soul, conscious of new strength, came out of bondage. . . . No deaf child who has earnestly tried to speak the words which he has never heard,— to come out of the prison of silence, can forget the thrill of surprise which came over him when he uttered his first word. Only such an one can appreciate the eagerness with which I talked to my toys, or the delight I felt when at my call Mildred [her little sister] ran to me, or my dogs obeyed my voice. . . . But it must not be supposed that I could really talk in this short time. I needed Miss Sullivan's assistance constantly in my efforts to articulate each sound clearly, and to combine all sounds in a thousand ways. Even now she calls my attention every day to mispronounced words. . . . I was forced to repeat the words or sentences, sometimes for hours, until I *felt* the proper ring in my own voice. My work was practice, practice, practice. Discouragement and weariness cast me down frequently, but the next moment the thought

[19] pp. 208, 9.

that I would soon be at home and show my loved ones what I had accomplished spurred me on.' . . .

"Helen Keller's story of her life begins with a child in her seventh year, with each of the avenues of incoming and of outgoing speech closed to her. After two months language begins with one word lodged in her consciousness by a most circuitous brain path. The book ends with a young woman, a graduate with honors of Radcliffe College, versed in the sciences taught there, along with extensive reading in Latin, Greek, French, German, and English classics, passionately fond of poetry and of history, a writer of the purest English style, and a thinker of no mean order. . . .

"But the physiological interest of her story is quite apart from the interest of her biography, great as that is. To a physiologist it is an example of a living brain, with the cells of the great visual area entirely and forever atrophied or wasted away, because that is what happens to those textural cerebral elements in cases of her kind. No word for reading could ever be registered in her angular gyrus, nor in any neighboring visual cells. And just the same extinction of hearing cells was present in her temporal lobes, so that not one was left there to catch the sound of a word any more than that of any other sound. Broca's convolution for uttering speech, therefore, could not have had a single 'telephone' wire coming to it from either of these two great afferent centers. After a while Broca's convolution began to be rung up by thousands of reiterated messages coming from a wholly unusual quarter in the brain, namely, the center of the sense of touch. 'Practice, practice, practice,' by the hour at a time — the work of an indomitable personal will — finally makes that convolution submit to this perpetual stimulation from the tactile area, till it becomes ready to do what Helen purposes, whether to speak, to read aloud, or to write."[20]

The sense of touch, on which Helen Keller so largely relied, is the most diffused of all the senses at the surface of the body. Not being localized in any one organ, like the eye, it is the least specialized of any of the senses, and its anatomical seat in the brain center is even yet not fully demonstrated. Normally there can be but very few if any nerve fibers connecting Broca's convolution with the area of the sense of touch. Nerve fibers grow in the direction of the stimulus which courses through them, a property often taken advantage of in surgery to restore the sensibility and mobility of a part when that has been lost by the severance of its nerves. "There is no improbability in the surmise that repeated currents of stimuli will in time project, as it were, new tracts of fibers from one cerebral convolution to another. . . . As a child by practice learns to use its hands and feet, new nerve

[20] pp. 211–215.

fibers by the thousand grow from the motor center of the cortex, to go down and make connections with the motor centers of the spinal cord. Such, moreover, must be the case in the organizing of the speech centers in the speaking hemisphere of the brain." [21]

"Another important conclusion is led up to by these facts, namely, *that we can make our own brains,* so far as special mental functions or aptitudes are concerned, if only we have wills strong enough to take the trouble. By practice, practice, practice, as in Miss Keller's case, the Will stimulus will not only organize brain centers to perform new functions, but will project new connecting, or, as they are technically called, association fibers, which will make nerve centers work together as they could not without being thus associated. . . . A person, therefore, acquires new brain capacities by acquiring new anatomical bases for them in the form both of brain cells, which he has trained, and of actively working brain fibers, which he has himself virtually created." [22]

"Therefore it is a Power not of the brain, because it is the masterful personal Will, which makes the brain human. By a human brain we mean one which has been slowly fashioned into an instrument by which the personality can recognize and know all things physical, from the composition of a pebble to the elements of a fixed star. It is the will alone which can make material seats for mind, and when made they are the most personal things in a man's body. In fact they are the only examples of the kind in his physical frame, because, though he cannot make one hair of his head white or black, he can and does make speech centers inside of his head, to say nothing of other centers of most varied faculty. So long as his brain matter has not become 'set' as potters would express it, by the lapse of years, he deals with his cortical gray matter by the purposive exercise of memorizing habit, as the potter deals with wet clay. And wondrously does he fashion it, until it no more resembles the same gray matter on the other side of his head in mental capacities, than unfashioned clay resembles a Portland vase. How could this clay itself make this peerless vase? As the educated hemisphere is the brain of man, while its fellow remains only that of the animal Homo, whence comes the incalculable difference between the two?

"Considering that it is not brain which makes man, but man who makes one of his brain hemispheres human in mental faculties we might even say that if a human personality would enter a young chimpanzee's brain where it would find all the required cerebral convolutions, that the ape could then grow into a true inventor or philosopher." [23]

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[21] pp. 218, 9.
[22] pp. 223, 4.
[23] pp. 238, 9.

For a further refutation of the materialistic view that mind is the product of brain and the brain is the storehouse of memories, see Bergson's *Matter and Memory.*

NOTE Z

SPENCER'S METHODS

James Collier, for nine years the secretary and for ten years the amanuensis of Herbert Spencer, writes as follows of him in a chapter on "Personal Reminiscences" appended to Josiah Royce's *Herbert Spencer, an Estimate and Review.*

"Whence did Spencer derive the materials for the vast structure which he reared? To no question is the answer more unsatisfactory. . . . It may be confidently asserted that he at no time received systematic instruction in any branch of science. . . . It may be doubted if he ever attended a course of scientific lectures. What is more surprising it may be doubted if he ever read a book on science from end to end. . . . Spencer composed his *Social Statics,* which is a book on ethics as well as politics, having read no other ethical treatise than an old and now forgotten work by one Jonathan Dymond, which he was never tired of citing, not quoting, for even this book he probably had not read through. He produced an original treatise on Psychology, and though he had 'glanced' (it was his favorite word) at Reid and Hume, he had prepared himself by reading only what he called 'that subtle book,' Mansel's *Prolegomena Logicæ.* Excepting Carpenter's *Principles of Comparative Physiology,* he had possibly not carefully perused a single book on Biology when he wrote his *Principles of Biology;* perhaps it will be considered an error and a misfortune that he hardly read even the *Origin of Species.* He composed his *Principles of Sociology* without reading Comte or Tylor, and no one was more astonished than he when Tylor claimed priority in originating the ghost theory on which the Spencerian science of religion is founded; *Primitive Culture* had stood on his shelves for years, but stood unopened. He wrote his final treatise on ethics without reading Mill, Kant, Whewell, or any of the recognized authorities on morals, excepting portions of Sidgwick. Where, then, did he find his ideas, and above all, whence did he procure his facts?" From his afternoons at the Athenæum Club, Collier proceeds to tell us, from reading the periodicals and conversing with the savants there, from his assistants, and from observation. "Most of Spencer's ideas, like his facts, were picked up. He was at no time a great reader. . . . Spencer's library was . . . wofully deficient in the class of books that might have been expected to be found in it. . . . In fact, he was not a reader at all, in the ordinary sense of the word, but only a gleaner."

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